University News

A FORTNIGHTLY CHRONICLE OF HIGHER EDUCATION & RESEARCH APRIL 1, 1980

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Centenary Year

Royal College of Physicians of London and Royal College of Surgeons of England

Sir Ratanji Dalal Research Scholarship in Tropical Surgery

The Sir Ratanji Dalal Research Scholarship was established under the will of Sir Ratanji Dinshaw Dalal, CIE, MRCP, MRCS, DPH of Bombay.

The Trust requires that appointments alternate between tropical medicine and tropical surgery; applications are now invited for an award in TROPICAL SURGERY, to be taken up not later than 1st September 1980.

The Scholarship is open to medical practitioners registered in any part of the Commonwealth, and may be held in any institution in Britain or overseas that is acceptable to the two Royal Colleges. It will be awarded for one year in the first instance but may be renewed annually up to a maximum of three years in all.

The stipend will be determined by the awarding committee but the total emoluments will not exceed £5,500. The award may, however, be held in conjunction with other support and need not be on a whole-time basis. The emoluments may include an allowance for research expenses and in appropriate cases a Scholar's existing superannuation arrangements may be continued.

Applications must be sponsored by a head of department who can offer facilities and technical assistance for a research project in tropical surgery and must include the following:—

1. Full name, age and qualifications of the candidate with the name of his or her medical registration authority and date of registration.
2. Past and present appointments of the candidate, with present salary and superannuation arrangements, if any.
3. Details of the candidate's research experience and publications, if any.
4. Names and addresses of two persons, in addition to the nominator (whose comments should accompany the application), who may be consulted about the candidate's achievements and potential.
5. A statement (500 words) on the nature and scope of the proposed research project, indicating its probable duration (maximum three years).
6. Particulars of other financial support, if any, assured or applied for, that may also be available to the candidate, and of the proportion of the candidate's time to be devoted to this research.
7. A declaration, signed on behalf of the department, that all necessary facilities will be provided in the event of the application being successful, with an indication whether this is contingent upon the receipt of a grant for research expenses and of the amount, if any, that would be required.

Nominations must reach the Assistant Secretary, Royal College of Surgeons of England, 35/43 Lincoln's Inn Fields, Loddon WC2A 3PN not later than **31st May 1980**.

R.S. JOHNSON-GILBERT, OBE, MA
Secretary
Royal College of Surgeons of England

January 1980

UNIVERSITY OF JABALPUR

Advertisement No. Estt/80120

Jabalpur, dated the 7th March, 1980.

Applications are invited on the plain paper for one post of Professor in Chemistry, in the scale of pay of Rs. 1500-60-1800-100-2000-125/2-2500.

Essential Minimum Qualifications :

(a) (*i*) A Doctor's Degree or published work of an equivalent high standard; and

(b) (i) A 2nd Class Master's Degree in a relevant subject with atleast 50% marks (B in the seven point scale) or an equivalent degree of a foreign University; and

N. B. While taking into account the marks/grade, the marks/grade obtained in internal assessment, if any, shall be excluded.

(ii) Atleast 50% marks at the Bachelor's degree examination, the basis of which division is awarded at the degree level by the University; and

(iii) Atleast 50% marks at the Higher Secondary/Intermediate/Pre-University Examinations, as the case may be;

And

(c) (*i*) Experience of teaching of post-graduate classes shall be atleast 10 years; and

(ii) Evidence of candidates having been awarded a Doctor's Degree under his supervision.

Having regard to the need for developing inter-disciplinary programmes, the degree in (a) and (b) (*i*) above may be in relevant subjects.

(N.B. The requirement regarding minimum percentage of marks shall be relaxed upto 5% in case of scheduled caste/scheduled tribe candidates.)

The candidates having specialization in any branch of Chemistry shall be considered for this post. Qualifications are relaxable in cases of candidates of exceptional merit. Names of eminent persons distinguished in scholarships who do not apply may also be considered for selection. The candidates in their applications should give details of their 'Specialization' if any. Canvassing in any form or on behalf of the candidates will be treated as disqualification.

The applications showing the details of qualifications stated above along with the information regarding the proof of date of birth and past experience accompanied with true copies of testimonials and Postal Order for Rs. 10.00 in the name of the undersigned should reach here not later than **30th April, 1980**. The candidates already in employment at present should send their applications through proper channel.

REGISTRAR

UNIVERSITY NEWS

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IN THIS ISSUE

Editor : ANJNI KUMAR

Management of Research

K. A. Jaleel*

Efficient and effective management is as important in Scientific research as in any industrial and business activity. The realization of this truth on the part of the scientific community, is reflected in the frequent attempts to evaluate the processes, procedures and products on research. With financial imports expected to dwindle in the next few years, the stress on scientific management of resources for research has to increase further.

In a broad sense, management refers to (i) the systematic ordering of priorities in the choice of goals and resources; (ii) the organizational structures to attain these goals; (iii) the optimal deployment of resources and their maximum utilization; (iv) the incentives and motivational mechanisms and (v) the evaluation of the out-turn for improvement of the total system.

(i) Priorities Research

The commonly employed criteria for deciding priorities in research have been promise of immediate returns in terms of social and industrial benefits, the practices and experiences in advanced countries, relatively unexplored areas of research, and the availability of infrastructure of facilities and training.

All these criteria are relevant. But in the context of the uneven development of different scientific disciplines in the country more attention will have to be paid to research that will serve as a catalyst or agent for the application of knowledge to social and rural development. Mention may be made here of the need for research in social sciences that will generate principles for bridging the gap between knowledge in agriculture, economics, social and animal sciences and the farm and field practices. Research into rural services, extention, communication, "appropriate" and "intermediate" technology form a high priority area from this point of view.

It is also warranted that certain areas of research are marked out as under developed. This is necessary in order to even out the present disparities. Sometimes the underdeveloped areas hold the key to the fuller utilization of knowledge.

From the point of view of the researcher there is no essential conflict among the theoretical, historical, applied and technical goals of research. However the sponsoring agencies and Universities are concerned with the choices facing them in terms of the relevance of the research to immediate social problems, current trends and the spin-off benefits. Efforts for formulation of priorities by ranking and listing the fields of research have not been very

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successful. We need a scientific methodology for determining these priorities.

(ii) **Organizational Structures** :

Two basically different organizational forms are common: the "centre" of "institute" with certain restricted research interests and the multiple interest institutions such as institutes of technology and universities. (Some of the larger specialized institution have the better charateristics of both types of organization). The two basic forms present contrasting pictures in terms of the rigours of scientific methodology and the immediate applied relevance of the work. In the recent years attempts are being made to bring about better interlinking between the laboratory and the industry with the objective of "on the spot" application, the co-ordination between the research institution and field application is no longer, a matter of academic discussion but a matter for immediate heuristic pragmatic solutions.

(iii) (a) **Manpower Planning and Training** :

It has often been pointed out that vast well trained manpower is a very strong backbone of research effort in India. However, this is not a matter for complacence: rather it underlines the task of judicious balancing of this factor with other inputs in research.

One aspect of this question is encountered in the Universities: this is the balance between teaching and research at various stages. Until recently some of the old universities in India had set a tradition; the University departments were to spend most of their effort on research and the affiliated colleges were to spend most of their resources on teaching. This was a division of labour which did not always find acceptance with Universities formed subsequently. Nor did this pattern work very well within the older Universities. There is need to examine afresh and thoroughly the interrelationship between teaching and research in the total context of higher education.

(b) **Training** :

The last decade has been a period of transition from total dependance upon foreign countries for training facilities in advanced research: to-day large areas are covered by indigenous facilities. The pattern of training has been developed on the model of UK and USA—often forming part of the post-graduate teaching programme, additional training is integrated into the M Phil and Pro PhD programmes. By and large this seems to be adequate. But within this pattern there are areas of special strength and weakness. Identifying such gaps in training and providing for their filling up is a task calling for constant vigilance. This is quite a critical matter as often available training restricts the choice of fields of research and of the techniques applied.

Areas such as quantitative methods in social sciences and humanities, experimental and statistical techniques in biological and biomedical research empirical methods in language and literature are illustrative of such areas calling for urgent attention.

(c) **Financing of Research** :

Much has been said about the contracting monetary resources in relation to the expanding needs in research. Efforts directed towards prevention of wastage and efficient utilization of available moneys are urgently needed. "Pipeline delay" is an illustration of the invisible inefficiency in the use of meagre resources: Funds are blocked at the source by being earmarked for a project; yet the work does not get off the ground because of paper work and administrative delays. Administrative concepts that loosen this bottleneck are likely to contribute to the efficiency of the overall research effort.

(iv) **Motivation and incentives**:

The role of adequate monetary incentives to hold first rate scientists in research in competition with lucrative careers in civil service and industry is obvious and has been stressed often enough. But the role of non-financial incentives such as social and organizational status is not adequately realized. Participation and group decision are accepted principles of industrial management today. However, with a few exceptions, the scientific community if left out of the picture in decision making in areas of vital relevance. This is not due to any deliberate intent: as yet effective methods of consultative management have not been fully developed in research.

Research organizations including Universities have to develop methods of resolving the administrator/Scientist role conflicts so that disincentives hampering research work are minimized. Empirical investigations have confirmed our traditional behalf that social recognition and the opportunity to realize one's creative potential are powerful incentives in the case of writers, scientists and engineers alike. Some investigations are going on today in universities and industries on the organizational climate conducive to originality and creativity in human work. The initial forays in this area have turned out to be fruitful and promise to throw light on aspects of social climate which stimulate and nurture creativity.

(v) **Social Accountability and evaluation**:

In the context of the special problems of our country, there is need to evolve new criteria for the evaluation of the input-output matrix of scientific research. The conventional criteria of potential consumer application, fall out into neighbouring fields will continue to be of relevance.

(vi) **Documentation and Communication Services**:

In both basic and social sciences, a good ground work of documentation and abstracting services has been built in the 1950's. However, there is a slackening of this effort in the recent years—due to complacency that comes from the smooth func-

(*Continued on page 167*)

Maintenance of Academic Standards in Indian Universities

K. N. Prasad*

The University, *in general*, is a firm having a number of plants (different colleges, departments and institutes). It is a multi-product (owning different faculties concern). Its products pass out of its portals after different stages of processing (intermediates, graduates, post-graduates, researchers). Some "intermediates" go over to other universities. Some of its finished products stay on in it and get invested or employed as inputs or agents in the process of future production. Their quality (expressible in terms of their knowledge and character) is a significant factor in the determination of the quality of the successive batches of students.

The level of achievement in the subsequent career of those products who join other activities turns on both their ability (power) and will to work, which are largely governed by (a) what they have learned, (b) how much they have learned, (c) how they have learned and (d) whether or not they have appropriate and adequate facilities for utilizing their learning (which might amount to bare capital consumption and hence the resulting fossilisation), of maintaining it in tact and of even promoting (widening or deepening) it. A myriad of variables has to be taken into account, such as follows:—Were the courses studied up-to-date or out-dated? Was there any inter-disciplinary teaching or was it strictly exclusive (for example, the bi-polar concept of humanities and sciences). Were the courses job-oriented or not (i.e., vocationalisation)? Did the students concerned aim at just cramming and passing the examinations? Or, did they strive to make their learning or portions of it an indissoluble part of their being? What were the content and extent of the courses they prepared for their examinations? Did they do mere selective reading by speculating and guessing questions, and hence omitting a host of topics, assuming that the last year's questions would not be repeated, as has become lately customary with the examinees in several universities? If such was the case, then the examination results cannot serve as a satisfactory measure of the proficiency of the students.

It has also to be noted whether the students were taught regularly, or by fits and starts because of the very high incidence of suspension of teaching work owing to frequent disturbances on the campus and a variety of other reasons, whether they received proper guidance from their teachers in the tutorial/seminar classes, whether they were taught well, on the whole, by their teachers, whether they worked hard and regularly themselves, etc.

In any age, more so in the present, learning by itself and in itself is not all; it has to be combined with a modicum of extra-or co-curricular activities for a student to become perfect. Now-a-days, the mentality of the general run of the students is to shun these activities. In consequence, the number of book-worms has been on the increase. The conditions obtaining in the universities have hindered, the growth of their traditional corporate life, which formerly brought the teachers and their taught together into close proximity. The 'commonwealth' character of the university community has been under severe strain. To the extent that the involvement of this community in constructive activities has dwindled, its participation in the destructive ones has multiplied.

All products of a university are supposed to fulfil a certain human need, that is, acquisition of education or learning or knowledge (and character, if permitted) to stop up the quality of life. Knowledge is at once a consumption and a production commodity, being a source of employment and income.

The level or standard of academic attainment or excellence of a university is interpreted or judged by the measuring—rod of viability or competitiveness of its products, in general and the performance of its teachers, in particular. Such viability may be local (or regional), that is, intra-university or inter-university in one and the same State or it may be national or international. It is viability from the national angle which currently forms the crucial or acid test, so to speak. A university, the products of which compete successfully in the all-India tests/examinations and get employed proportionally more, is demeed to be excellent or stated to possess a higher standard, assuming that facilities available to others outside the campus remain equal. We should not also forget in this context that teaching is an art.

True as this proposition is on an average, it is not true in respect of the students of each and every discipline since no university can at any time enjoy a superiority of this kind in all areas of knowledge. Moreover, the academic distinctiveness of a university is a collective or group achievement or gain, being the outcome of shared responsibility. A metropolian university has a definite advantage over an outlying one in being nearer to the *conjuncture*, or sum-total of conditions, which the capital city enshrines within itself. But this has also its debit side in as much as the magnifying power of any causative factor, good or bad, in such a university (more so, when it is residential) is very great, with the result that even a small event, good or bad, gets unduly publicised forthwith.

Besides, we must remember that this relative viability is dependent on individual properties.

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There are instances to show that some graduates have fared far better than some post-graduates, although they all have belonged to the same university. The final results are declared on the basis of a written test followed by an oral, in which latter case cent per cent impartiality cannot be vouchsafed.

The features that characterise an ideal university are altogether different from those that characterise a real (i.e., that belonging to the world of our experience) one. In the former the quality-promoting factors far outnumber the quality-dampening ones. Either all students or at least a certain percentage of them is admitted through an open entrance examination. Merit is the all-deciding criterion. Reservation of seats for giving any section of society a preferential treatment is either not in vogue, or if in vogue, is remedied subsequently by special arrangements. The best candidates are selected for manning the teaching posts. All teachers engage themselves in research. Good teaching as well as good research is suitably induced. Teaching and research stand to each other in an ideal relationship. Teaching is to research what is the Bunshen burner or the test tube to the chemist. Students and teachers enjoy maximum facilities of library and laboratory. The university does not suffer from any financial crisis. It has a residential character. Normalcy reigns supreme over the campus. The various components of the university live and work under perfectly harmonious and cordial conditions. Examinations are conducted on time and in a fair manner. External experts are associated with them at all stages. The system of reward and punishment functions effectively and freely. Whatever lapses and aberrations occur from the normal course are soon rectified by the built-in stabilisers of the system, and progress ensured thereby. The management of the university lies in the hands more of academicians than of non-academicians.

But the ideal university is a limiting or extreme case in our country of to-day. The university, which is commonly met within the real world, is marked by opposite conditions. There is a mushroom growth of colleges, and overcrowding (a sort of population explosion) in most colleges, particularly in these teaching science and/or commerce alongwith arts, disproportionate to the infrastructure available in them. Seats are reserved on various grounds. Merit is scarcely the only consideration in admission of students and recruitment of the teaching and non-teaching staff. A lot hinges on such ulterior or extraneous considerations as caste, party loyalty, group or pressure tactics, *pairvi*, and the like. The university is interminably in the red. It is constantly in the grip of unrest, chaos and turmoil. The unions—of the students, of the teachers, of the employees-keep the university in a warning state by working up agitation and tension in turn. There is inadequate, irregular and imperfect teaching. Practical work is on suffrance. Verbalism predominates in science teaching. Things are any how tolerable up to graduation. After their graduation the students are apt to treat their stay at the university as waiting until they are able to find out a job and hence they do not evince much abiding interest in their studies. This listlessness or insipidity is typical of a chronically unemployed economy. Research is intensely restricted, if not otherwise unknown. Examinations are delayed. Unfair means is resorted to on a mass scale. Examinees stage walk-outs on one pretext or other. Either re-examinations have to be held or average marks have to be awarded. Results are frequently moderated and grace marks are frequently awarded with a view to raising the percentage of passes and thereby enabling a larger number of graduates to obtain the requisite percentage of marks in the aggregate, for being eligible for certain all-India competitive examinations (say, in banking and insurance). Favouritism knows no bounds. Monopoly and vested interests have their footheld in the academic and administrative bodies and they are mostly from outside the university. But they are, in effect, more powerful than their teacher counterparts. The entire atmosphere is vicious, suffocating and politicalised. The retrogression afflicting the university becomes a cumulative process. It is propagated by a multiplicand. An unending flight of good students (and teachers) from the university takes place. But in a good many cases they are *pushed* rather than *pulled* by the superior, prestigious universities. This is compounded by the ever-increasing frustration and disillusionment suffered by the few dedicated and conscientious teachers. The majority of teachers neglect their duties. They do not add to their knowledge. They simply impart it. This is analogous to capital consumption, to drawing a perpetual royalty, as it were. Some run or teach in private coaching institutes or take to hack writing and earn plenty of *black money*. Some engross themselves in paid extra co-curricular activities and often remain away attending camps and workshops. Some accept too much examination work from other universities. They are always on the camel's back. Some make it a point to attend all manner of seminar and symposium organised anywhere in the country. The actual number of lectures and tutorial classes engaged by these categories of teachers in a session is nominal. The existing practices in several universities encourage such absence and the consequential neglect of duties. Gone are the days of dedicated, self-sacrificing teachers, notable for their simple living and high thinking and 'cloistered' life. Rank mercenarism rules the roost.

As a rule, the vice-chancellor is not only the administrative but also the academic head of a university. None-the-less, the extent to which he can be successful in the latter capacity depends largely on his academic personality. If he is a distinguished scholar (and has been a fairly senior teacher), he evokes due respectability for himself and provide the academic leadership expected of him. On the other hand, the chance of his success is not great if his is a basically "political" appointment. Apart from this, he must be free from this numerous administrative responsibilities and chores to devote

his time, and energy and attention to the academic renovation and improvement of his university.

Higher education in our country has not evolved from the indigenous conditions but instead it has been, by and large, a mere copy from the Western system and in spite of a long elapse of time it has not been possible so far for us to effect a reasonable degree of harmonisation between the two.

The socio-economic backgrounds of the different constituents of the university community get vividly reflected in the campus life.

Our existing universities are plagued by the drawbacks of a permissive society, the continuously rising average age at marriage (which has definitely lowered the sense of responsibility), a glaring lack of a national will or ethos, the collapse of the value system, incessant deterioration in the standard of education at all levels, milling of shaddy products and of unemployable graduates by the universities (who come to compose the critical, cynical band of the 'lumpen proletariat'). The universities comprise an oligopolistic market. Motivations and anticipated decisions play a potent role. Decisions interact. Decisions taken by one university deeply influence those taken or to be taken by other universities in the same region or even outside it. At times the Government administers their teaching schedule by ordering its suspension on grounds of law and order or conducting of general elections. Generalising, we can say that the academic standard of a university is a function *inter alia* of the level of economic prosperity attained by the State or the region in which it is located. It is a function also of the distance of the State university from the Centre insofar as the universities nearer it have greater access to the bodies that finance higher education. The Central universities do not have to face financial stringency whatever their distance from Delhi. They enjoy more opportunities and encounter fewer obstacles, compared to the State universities. They are like big cities, the so-called like "magnets".

The academic standard of a university is also contingent on the social environment or milieu around it, the attitudes, approaches and expectations of the public at large, including the parents/guardians of the students (whether they take active and keen interest in or are indifferent to its multifarious affairs) and its 'old alumni', of the Government (which profoundly determine the degree of its autonomy, administrative and financial), and, last but not the least of the bodies like the University Grants Commission.

During the short run a university can at best exert its utmost to achieve stability by directing its activities in accordance with the norms of teaching, research and extension laid down by the University Grants Commission. This would be possible only when there is uninterrupted and unbroken peace, amity and goodwill on its campus for some years to come. As such, the immediate task to which a university should address itself is to consolidate its existing position by launching a campaign to contain those forces which account for the persistence of indiscipline on the campus and off it.

During the long run a university should be in a position to call its attention to the goals of progress and development, such as opening of new departments, proper balancing of teaching, research and extension, meeting of its felt needs, improvement of its faculties, re-structuring and streamlining of its curricula, providing for inter-faculty mobility or flow of students, reform of the modes of examination, achievement of autonomy, both organisational and financial, identification with the society around itself to prove its social relevance and usefulness, forging of a mechanism whereby efficiency tests for the students and staff can be monitored with absolute objectivity, revamping of the system of reward and punishment, promotion of the 'delivery' technique so that class-room teaching is properly received by the students, exposing the students to the latest ideas, idioms and nuances of sciences and humanities by arranging extra-mural, popular lectures for the, exchange of good teachers for a term, sending the best students for a period to the best universities, and so forth. Any attempt to realise complete or rigid equality or uniformity in academic standards of all the universities will be neither feasible nor desirable. However, ways and means should be devised whereby all universities have a minimum academic standard. In most universities the stuff to which the teachers have to deliver their lectures is at present so inferior, so deficient, so ill-equipped mentally, and has such a poor receptivity capacity that they have *per force* to lower the sights and heights of their lectures in order to make them minimally intelligible to it, leave aside the object of inspiring them to wider and critical reading. All the same, it would be worthwhile to elevate the status of the laggard but potential universities so that they burgeon into counter-magnets. Likewise, it would be expedient to develop a few colleges and institutes as centres of excellence by limiting admission to only those who can afford to pay for their higher education at the market rate, for at the moment higher education is a heavily subsidised public consumption good. □

Management of Research

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tioning of a service. There is need to augment these services and to utilize them more fully.

Not every one of the large number of MA, MSc, MPhil and PhD dissertations may be a masterpiece: yet the sports of creative ideas contained in them have to be recorded, identified and catalogued. Publication of abstracts of dissertations and of work in progress must be made more comprehensive and timely. Financial support for this effort is essential and must be viewed as many times as rewarding as investment of a corresponding sum of money in research itself.

A newer dimension in management as well as in documentation is introduced by the current stress on inter-disciplinary research. The scope of research which is problem oriented and which cuts across conventional boundaries of sciences is fully recognized—yet the organizational response has been far from sufficient. Documentation which will bring out and further facilitate cross disciplinary interaction is the need of the hour. □

Future Philosophy of Asia

J. A. Karunaratne*

It is often assumed that the future of any human activity can be understood only in relation to the past. This cannot, however, mean that the future is so completely determined by the past that what is implicit in the past is made explicit in the future. What is yet to come may bring its own surprises? It may belie expectations or could take us beyond all that was to be expected on the basis of past experience. This is the reason why history is unpredictable.

Though the historical process flows from human decisions, what matters is not the decision of one individual but that of many in their positive and negative interrelationship. If we try to imagine how philosophy will develop in the Hindu-Buddhist context in the future we will have to take into account many considerations. Above all, we will be called upon to look at philosophy in its classical heyday and its post-classical stagnation.

If it is true to say that the best introduction to philosophy is the history of philosophy, it is even truer to say in our frame of reference that the history of philosophy is not only an introduction to philosophy but it is the whole philosophy. This by no means underrates the significant development of Hindu-Buddhist thought in the recent years. But the recent Hindu-Buddhist thought has not yet been fully crystallized. It is not yet gone beyond expositions of classical masters, commentaries of the classical texts, attempts to appreciate Hindu-Buddhist tradition in a comparative framework and to see modern insights or even "oversights" as parts of the South and South East Asian tradition. Again, it must be remembered that the philosophical situation in a country cannot remain unaffected by its socio-political milieu.

Experience and Silence. The philosophy or darsana in the South Asian tradition is not the same as philosophy in the Western tradition. It is more akin to hikma of the Iranian perspective. It is true that theoria in its original meaning is vision. In the course of time, however, the theoretical sphere stood for conceptual construction led to a priori constructions independent of experience. The Hindu Buddhist philosophy can be understood through a dichotomy familiar to Western thought between empiricism and rationalism. The Hindu-Buddhist philosophy is experience and this experience has much wider significance than that of the empirical western tradition. As experience, it cannot be taught but communicated. The communication of philosophical truths through a dialogue between a master and disciple is not unfamiliar to the Hindu-Buddhist tradition.

However, there is a deep difference between the Socratic dialogue and the conversations which took place between the master and the disciple in ancient South Asia. The "awakening" is effected on a much deeper level than was possible in the Greek setting. Hence, though philosophical discussions have been very common in ancient Asian scholarly tradition, they always presupposed the possibility of realisation. Argument has only a traditional character. Once we have understood what is "meant" the discussion ends and silence will be the most natural outcome. Oriental wisdom like oriental love can only be whispered and hence silence is the most spontaneous conclusion.

A remarkable fact which is never to be lost sight of in Oriental philosophy is that this discipline has at least this much in common with art that the pattern of one's philosophical thought is equally determined by historical conditions and one's personal perspective. The classical Greek way of philosophy began with wonder, modern philosophy with Descartes began with doubt and the Hindu-Buddhist philosophical consciousness was provoked by the experience of suffering. This means that, in spite of the universality of philosophical experience its specific mould varied from period to period of history and from culture to culture. Even in the same cultural context the accents shift: as a cursory glance at the philosophical situation in the West may amply testify. With all the horrors the West passed through two global conflagrations it would not be expected to remain the same.

What is remarkable about philosophy is the fact that every nation has its own philosophical tradition and even within the broad framework of the same culture there may be widely different philosophical traditions. Within the Western philosophical tradition there are German, British, Italian, French and Scandinavian variations of philosophy. It is interesting to see how divergent they are. Hence, it is not rare to find movements which, because of their national saturation and conditioning, may hardly find an echo in another tradition and may meet with little understanding and appreciation. Thinkers like Louis Blanc, Mikhail Bakunin, Peter Kropotkin with all their novel ideas and social insights could not have any impact on the Anglo-Saxon tradition. The deep thought current of the Buddha Dhamma also creates problems for the Western intellect. In spite of the fact that the message of Sri Aurobindo's philosophy is conveyed through a foreign language, it presupposes acquaintance with the whole of Indian philosophy to be intelligible to the foreign student.

Another very important factor to be taken into account is that philosophy has its roots in language and, try as one may, the philosophical problem cannot be adequately expressed through symbols only. One of the main reasons why Hindu-Buddhist philosophical thoughts have yet not succeeded in securing

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their own place in the world of philosophy is language. Hindu-Buddhist philosophy have their roots in Pali and Sanskrit and cannot be expressed through the medium of any Western language without forfeiting their identity. It is, therefore, all the more necessary to cultivate South and South East Asian classical languages and this study should be maintained more fervently. It may not be satisfying, therefore, only to teach languages like Pali, Sanskrit and Hindi in Western academies, but also the languages like Sinhala which houses the treasure of the Buddhist philosophy.

The Hindu-Buddhist philosophy as they are developed today and as they may develop in the future cannot bear repetition of the thought patterns of the classical period. As the Asian history did not come to a close with the classical period, the same thought cannot be said to have come to an end with the Vedic and Buddhist period. In the course of time foreign influences began to work and the impact of West Asian culture and of Occidental thought has been undeniable.

Whereas it is now realised that modern thought cannot be understood without any reference to medieval thought, it is not fully realised that medieval thought cannot be made intelligible without a reference to pre-medieval scholasticism.

Now the most pertinent question is to ask: what after all is the Asian philosophy of Hindu-Buddhist tradition ?

If Asian philosophy is to develop in an authentic way all the historical forces which have made the nation what it is today have to be reckoned with. Asian philosophy cannot be considered a finished product, complete in some period of history, but a living process which will continuously grow. It will retain its identity through the diversity of its constituents and through persistent growth.

The world has witnessed many revolutions but these revolutions have not been possible without any philosophical motivation. Great philosophers have been the "unmoved movers" of the world history and it will be left to our philosophical minds to rise to the occasion. So, instead of being silent spectators sheltered in some academic asylum (which are fast loosing their raison d'etre) and talking about the whole mankind (and women-kind), they would be called upon to give direction and guidance to the new-comers who know how to act and offer sacrifice but are not enlightened enough to know the goals worth sacrificing for. □

Development of a Good Management Information System

P. Sivalingam*

With the increasing enrolment in Universities and the proliferation of the number of courses and programmes, it is increasingly becoming difficult to extract information when it is badly needed. Of late, many universities have computerised the preparation of students' mark grade sheets. Beyond this work which are almost completely being carried out through external private computer service bureaux, no other significant use of computers seems to have been made within the universities. The modern high speed computer can assist the planners and administrators of our universities to take meaningful decisions at the right time by monitoring information at a speed and reliability which cannot be matched by any manual or mechanical means.

Micro and Mini Computers are now available at costs ranging from about Rs. 10 lakhs and with an annual recurring budget of about Rs. 3 lakhs, a very good and compact centralised source of information could be maintained. The UGC in its pattern of funding must be requested to provide funds for this specific purpose to improve the information system that is available in our Universities.

Need for appropriate or relevant research

Research is one of the major activities with which all universities are concerned. At the moment there appears to be broadly three categories of research that are being carried on in our universities. These are

(1) basic research
(2) applied research and
(3) development research.

Needless to say, all these are important and relevant in their own right. But in a country like ours the question of excessive indulgence in basic research needs to be looked rather closely. The funding agencies should make it a policy to encourage the applied and development research projects in preference to the basic research projects. Wherever possible the research activities should emphasise applied rather than basic research and should most preferably result in the immediate application of the fundings or results of such research in the relevance of Indian problems. □

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Complex problems of Higher Education

Getting University degree is only a means to an end, not an end in itself. It merely equips me to enter in a profession of his choice. Please do not think that you have learnt everything and known everything; for wide and extensive are the vistas of knowledge. The horizon is fast widening and what you have learnt may just be a drop in an ocean. What is taught in a University is a method of acquisition and assimilation of knowledge, pertaining to different subjects and disciplines. Knowledge and learning can never be a static thing. Almost every discipline is fast growing and being enriched with new frontiers of knowledge. Perhaps,

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each one of us, even at a very late stage of career, has to continue to be a learner. This learning process continues throughout one's life. Besides formal methods, there are various other non-formal means and avenues which go on enriching our knowledge and experience. Life and society are much larger and certainly life's experience cannot be covered or taught, in a span of a few years spent in a seat of learning. As a matter of fact, the basic purpose of the seats of higher learning is to properly equip the mind to be receptive to new ideas, to be able to analyse and sift facts and perceive new dimensions of knowledge. To achieve this, one must have a disciplined mind with an inquisitiveness to learn, analyse and assimilate. It is a searching and questioning mind, accepting nothing that is not supported by critical analysis and rejecting nothing which has been scientifically proved and results properly tested. A disciplined mind thus has the scientist's training and traditions of questioning, analysing, understanding, assimilating and thus creating new knowledge. What, therefore, you have acquired is a properly organised inter-dependent and inter-related knowledge, which has equipped the mind in a scientific spirit of quest and enquiry, making your brain a sharp intellect, with the tools of analysis and not just a lumber room stacking unrelated and unconnected things.

If we took to the economic, social and political history of a number of developed nations of the western hemisphere, it will be seen that revolutionary changes in the social, political and technological spheres were effected over a comparatively longer period and very often these have been effected independently in different spheres, of course, with a degree of interdependence. In our country, however, after attainment of Independence, we had the task before us of bringing about revolutionary changes in a comparatively shorter span of time and simultaneously, in the social, political and technological spheres, all compressed and rolled in a package for the ultimate objective of building up new socio-economic order based on socio-economic justice and free from exploitation. In this task of national reconstruction, the most crucial input obviously, is the human material, particularly those who are to be the architects of building up the new socio-economic order. With this objective, we have progressively tried to increase the investment on this crucial input of education, so as to have its proper, purposeful and viable orientation. It is true that the social return of this investment baffles quantification. In the economic and technical sphere, however, perhaps it may be possible to have some sort of exercise in demonstrably quantifying the rate of return on this investment, through computing employment, including self-employment and other quantifiable results.

Education can be an effective instrument of bringing about qualitative socio-economic change. Revolutionary changes in the social, political, technological and economic spheres, have their own degrees of independence and inter-dependence. Unless our various development programmes are properly and purposefully balanced, the affluence brought about through development efforts can even be responsible, at times in a concomitant way, of generating regional and social tensions. This can be due to the widening gap between development of different regions as also due to benefits of development being unevenly shared by different sections of the society. As a matter of fact, the problems of the modern individual, group and society can significantly be described as 'tension management'. Our younger generation has before them the task of being 'social engineers', in helping to build up a new social order, free from exploitation and based on the ideals of social justice.

Over the years there has been substantial quantitative expansion in the field of education in India and consequently we have one of the largest educated manpower in the world. Simultaneously we are confronted with the problem of educated unemployment, not only in arts but in technical lines as well. Substantial amounts are spent by parents and guardians

over higher education on their wards in the hope that on completion of educational course they would automatically be getting a lucrative employment. When they are faced with the problems of unemployment on passing out, it obviously creates a lot of frustration and disappointment, both to the students and their guardians. This happens because the University degrees are unfortunately sought, very often, merely as a passport of employment. University education, however, has a much larger and wider objective of training the minds and developing skills so that students passing out can become useful members and contribute to productive activity of the society. The situation of frustration to which I made a reference arises because, somehow or the other, possession of a degree has been linked with employment prospects and opportunities. In recent times, however, a number of organisations, instead of going merely by degree, have been conducting their own competitive examinations for recruitment of different positions under them. Very often this becomes necessary because of the difficulties in reducing qualifications of different Universities and Institutions to a common parameter. A common competitive examination exposes products of different universities to such a process. As a matter of fact, on the basis of my experience of higher education and association with recruitment policies, I can venture to pose before you the question as to whether and how far the possession of University degrees could be delinked from at least certain categories of jobs. This will reduce such quantitative expansion of numbers that might be due to more job seeking. Only those persons should seek higher education who feel that they are either equipped or have the potentialities of benefiting in a qualitative way from University education. Instead of aspiring to be merely job seekers they should aspire to equip themselves to become potential employers. This emphasis on self-employment and becoming employers themselves can help tackle the staggering problem of educated unemployment and eventually would help in creating a self-generating economy through a multiplier effect in an expanding economy.

Instead of remaining complacent with the quantitative expansion of education we have thus to bring about and aspire for a qualitative change so that higher education can be effective instrument of socio-economic change. Acquiring intellectual qualities, moral and spiritual values and discipline would help to build a balanced and integrated personality with a distinctive indelible imprint of the culture imbibed in the Alma Mater. This is the purpose of higher education in the true sense of the term. There is no room for the belief that all education is a social good. If the standard of education is high and quality good, it can be the most powerful tool for the national development, if, however, its standard is unsatisfactory, it may create social problems and retard progress. Employability of a person is dependent on the quality of education he has received. This partly explains the magnitude of educated unemployment in India.

In Indian situation, where each region has its own developmental programmes, the role of universities in promoting regional development, cannot be over-emphasised. Thus researches conducted in the Universities should have to have a purpose and a social objective in the context of national plans for India's socio-economic development. Whether one is a social scientist or a physical scientist, there has to be a greater emphasis on inter-disciplinary and problem-oriented research projects. This is all the more essential for a developing nation. A number of areas can be identified for such type of research where Universities can usefully contribute. There was a period when we had to simulate technology from other countries. Transplantation of a foreign technology obviously has its limitations in our own socio-economic ethos. Now, a time has come when we have to devise technology that would stem up from our own indigenous requirements and resources and is consistent with the socio-economic requirements and objectives of our country.

(Excerpts from the Convocation Address delivered by Dr. A.R. Kidwal, Governor of Bihar at the Utkal University.)

Bombay University Library Centenary Celebrations

The centenary year celebrations of the Bombay University Library and the Rajabai Tower Building were formally inaugurated by eminent educationist, Dr. V.K.R.V. Rao on 27th February 1980 at a well attended glittering function on the lawns of the University gardens. It was on February 27, 1880 that the Rajabai Tower housing the University Library was declared open to readers.

In his inaugural speech Dr. Rao pointed out that this Library should be preserved as a living entity, as the place had a distinct personality of its own, which had been conducive to intellectual pursuit. He said that the Library had not only imparted knowledge to thousands of students but also provided them with a certain cultural background. He suggested that the University set up four Sub-Libraries in the different suburbs of the city which could be co-ordinated by University Library. Dr. Rao also proposed that the Bombay Municipal Corporation and the University of Bombay jointly undertake a project to establish a sister library in the city for the benefit of knowledge-seeking citizens of Bombay.

Earlier Prof. Ram Joshi, Vice-Chancellor said that it was on February 27, 1880 that the Rajabhai Tower having the University libraries declared open to the reader. He traced the historical development of the University Library and the role it played in the scholarly world. Former Librarian Dr. P.M. Joshi, Architect Shri J.G. Bodhe and Industrialist Shri S.P. Godrej who are all among the members of the Centenary Celebrations Committee referred to the Committee's Rs. 75 lakhs development project of the Library.

A place of honour was given on the dias to Mrs. Tarabai Manekchand, daughter-in-law of late Sir Premchand Roychand, whose two separate donations of Rs. 2 lakhs each a century ago resulted in the creation of the Library and the tower in memory of his mother Rajabai.

In 1879, the library consisted mainly of the following collections :—

(1) a number of miscellaneous books (mostly historical and biographical) presented by the Government in 1864, when the old library of the East India Company, was removed to the India Office some of the books being divided among the Indian Universities.

(2) Dr. John Wilson's Collection: This was purchased in 1987 by the University from the heirs of Dr. Wilson (after whom the Wilson College is named) and consisted mainly of Orientalia, and books on travel and theology.

(3) books presented to the University.

In the early years, the library had an annual book budget of Rs. 400 but this was later discontinued so that in about 1900 we find that "the only additions now made to the library are the official publications sent in by the Local Government and the Government of India and some school and college books presented by publishers." The library then had 4,504 books and 214 manuscripts.

It was only after Sir Alfred Hopkinson's report of 1914 that attention began to be paid to the planning and development of the library. Sir Alfred suggested the appointment of an experienced Librarian and also appointment of a Library Committee under the control of the University Syndicate.

The annual grant to the library was renewed but the amount was not fixed and it varied according to circumstances. In 1930, the library got a non-recurring grant of Rs. 50,000 from the Government to strengthen its collection for post-graduate work. In July 1932, a book grant of Rs. 8,500 was made. It was increased to Rs. 18,500 in the following year and the year later to Rs. 20,000. Thanks to the various loans and donations including from the U.G.C., the India Wheat Loan Fund other individuals and organisations, the library's stock of books and periodicals has been steadily growing and the library today is literally bursting through its seams, even though four tier annexe to the main library building to provide space for 2,20,000 books was built in 1959.

The library is particularly rich in various reference materials, bibliographical tools, books on Mathematics, the Social Sciences and Indology. It has also a valuable and rare collection back files of periodicals in Sciences, the Social Sciences and Indology.

The library possesses more than 1,190 Mss. in Arabic, Persian and Urdu and about 7,418 in Sanskrit and allied languages.

A descriptive catalogue of the Arabic, Persian and Urdu manuscripts in the library compiled by Khan Bahadur Abdul Kadir-e-Sarfaraz was published in 1935. This collection contains manuscripts on the Islamic theology, logic, metaphysics,

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Sufism, history, biography, literature, lexicography, astrology and astronomy, medicine, archery, falconry, Dakhni language and Zoroastrianism. There are also translations of Sanskrit works.

The second collection of the Arabic, Persian and Urdu Mss. which contains some valuable Mss. in Dakhni Urdu belonged to the late Maulvi Muhammad Yusuf Khatkhatay of Bombay. This collection was brought to the notice of the University by Professor A.A.A. Fayzee and it was purchased for the library from the heirs of the late Maulvi Saheb. A catalogue of this collection is under preparation.

A valuable collection of 160 Arabic Mss. was donated by Professor Fayzee in 1962. These deal with law, history, theology and philosophy of Mustalian Ismailis, popularly known as Daudi and Sulaymani Bohras. This collection has a special significance because it makes available to scholars and research workers material which was deemed to be highly secret and not allowed to be in the hands of non-sectarians. Some of the unique items in this collection are: "Kitabul Islah" and "Alamun-nubuwa", two important works of the first Ismaili author, Abu Hatik ar-Razi; most of the works of Hamiduddin at Kirmani, chief writer of the Fatimid period; some of the works of Mu'ayyad fid-din ash-Shirazi, another famous writer of the Fatimid period. A descriptive catalogue of this collection compiled by Professor Muizz Goriawala was published in 1965.

The first collection of the Sanskrit Mss. is known as the Bhagvatsinghji Collection of Sanskrit Mss. This has been built up out of the proceeds of a special endowment made in 1885 by the Thakor Saheb of Gondal. The second collection of the Sanskrit Mss. is named as the H.M. Bhadkamkar Memorial Collection. This was brought together by the late Professor H.D. Velankar, named in the memory of his teacher, the late Professor H.M. Bhadkamkar of Wilson College and presented to this University. This collection consists of 1,200 Mss. and includes many important and interesting manuscripts among which is one of "Ganeshakutukamrita" a poem in Sanskrit in the praise of Ganesh written by Nanasaheb Peshwa. The manuscript is incomplete but it was the only one known at the time. The collection also has 52 rare manuscripts in Marathi. A descriptive catalogue of these two collections compiled by Professor G. V. Devasthali was published in 1944. The third collection of the Sanskrit Mss. in the library is called the Itcharam Suryaram Desai Memorial Collection of 1,688 Mss. This was presented to the library by the proprietors of the Gujarat Printing Press, M/s. N.I. Desai and B.I. Desai, sons of the late Itchharam Suryaram Desai. It contains a "Matsyapurana" manuscript which is nearly 340 years old and also a valuable set of "Bhrigusumhita." A descriptive catalogue of this collection complied by the late Professor H.D. Velankar was published in 1953.

Inauguration of Bombay University Library

Another valuable collection of manuscripts is the Moropant Collection donated by the descendants of the celebrated Marathi poet and consisting of 1,174 Mss. in Marathi and Sanskrit on various subjects. Some of the poets' autographs are also available in this collection. A descriptive catalogue of this collection is under print.

Recently, 210 Mss. in Sanskrit and allied languages were acquired from Jodhpur and among them is an anonymous work on the Marathi language entitled "Dakhanibhasha Stavanam", several beautifully illustrated manuscripts, also 23 Hindi Mss. and one of them a rare item entitled 'Barahata Naraharadas' as Avataracharitra.

Since the publication of the two catalogues of the Sanskrit and Prakrit Mss., the library has acquired in all 1,275 Mss. either by gift or purchase. A printed catalogue of these Mss. is under preparation.

In 1959, the library received an endowment to commemorate the services to the cause of education by the late Smt. S.U. Shukla. The object of this endowment is to build up in the University Library a collection of Gujarati Mss., old and mediaeval, early printed books in Gujarati and also micro-film of original Mss. Some rare books and Mss. have been acquired so far for this collection.

Besides, the library has 181 palm leaf manuscripts written in Grantha script.

The library has a fairly good collection of early Indian imprints, many presented by Professor A.K. Priolkar who also recently gave a donation of Rs. 20,000 for the purchase of early Indian imprints for the library. A catalogue of the early Indian imprints in Marathi and Gujarati in the Library was published in the Journal of the University of Bombay, Vol. XXXIV, Part 2, Sept. 1965. Another selective catalogue of these rare books was published in 1967 on the occasion of an exhibition to commemorate the centenary of the Press and Regulation of Books Act, 1867.

During the last few years, the library has been able to acquire some valuable source and research materials which include :—

1. A collection of diaries, account books and personal records of old Bombay families, among which may be mentioned the records of Sir Jamshedjee Jeejeebhoy, the first Baronet, ranging over a period of 1826-1876 and Serene Maneckjee Cursetjee (1857-1939).
2. Newspaper cuttings presented by Mr. Ashana Irabatti of Sholapur mostly from the Marathi language newspapers since 1825.
3. Microfilm copies of records of interest for students of the Maratha history from the French archives.
4. A collection of miscellaneous letters and newspaper articles of Dr. B.R. Ambedkar.
5. In 1972, Dr. Baburao Patel presented to the University Library 750 files of newspaper cuttings all systematically arranged topic-wise, mostly dealing with Indian and International Social and Political conditions in 1950s and 1960s. This collection also contains cuttings on various important personalities, both Indian and foreign.
6. In July 1978, a collection of over 12,000 books and back volumes of journals in Marathi, English, Hindi, belonging to the family of Lokhitawadi, Pune was purchased.
7. A collection of art books presented by Mrs. P.F. Pavari.
8. A collection of 342 rare letters of late Lokhitawadi presented by Dr. (Smt.) Indumati Parikh.

The University Library receives books and journals by way of *gratis* and presentation from a number of individuals and institutions.

Jawaharlal Nehru library at Vidyanagari Campus

A unit of the University Library was started in July 1971 at the Vidyanagari (Santacruz) Campus of the University when the Departments of Statistics, Physics, Chemistry and Geography were shifted to this Campus. With the shifting of Departments of Economics, Sociology, Applied Psychology and Mathematics there, thousands of books and periodicals pertaining to these Departments were transferred from the Fort Library to the Vidyanagari Campus Library which was then housed in the Arts Faculty Building.

The construction of the Library Building was started in January 1973 and its first phase completed in July 1976. The new library building, named, Jawaharlal Nehru Library was inaugurated on 18th October, 1976. The second phase of the construction has been recently taken up, and is in progress.

The Jawaharlal Nehru Library now functions in a fullfledged manner and caters to the library needs of students, scholars and faculty members of the Departments situated on the Vidyanagari Campus.

The resources of these libraries are used not only by the faculty and students of the University and its affiliated Colleges but also by research scholars, firms, institutions and the various Government departments in the city. Through the inter-library loan service, the library makes books available to scholars and research workers. It also procures photo-copies and micro-copies of rare materials from other libraries, when requested by research workers and supplies photo and micro-copies of materials available in the Library, the cost of copying being borne by the reader.

The Library at present has a stock of over 4,50,000 volumes.

Museum Section

The Library has developed a museum section comprising of special collections of newspaper cuttings and clippings, letters and diaries, photographs and portraits, maps and other non-book material.

Department of Library Science

Training in Librarianship in this University was started in 1943 when a Diploma in Librarianship Course was instituted by the University Library. In 1964 a full-fledged Department of Library Science was established and the Diploma Course was converted into the Degree Course (B. Lib. Sc.) with some changes in the syllabus. The Master's Course leading to the M.Lib.Sc. degree was introduced in 1967.

Saurashtra University organises camps

The College Development Council of Saurashtra University has planned a scheme to establish contact between the teachers of affiliated colleges and the teachers of university departments. Under this programme an affiliated college can invite one or more teachers from university departments for a maximum of 3 lectures/seminars in a subject taught at the undergraduate level at the college. It will provide an opportunity to college teachers to disucss the matters regarding teaching of certain topics prescribed in the subject with the teachers working in the university departments. The affiliated college will provide hospitality but the univer-

sity will bear the travelling expenses of the university teachers.

Uptil March 1980 as many as thirty lectures by different university teachers have been delivered in the affiliated colleges. The College Development Council has also recommended to the Syndicate to make available the facilities in the university library to college teachers from mofussil colleges on Sundays and holidays.

The university also organised the national adult education programme with the assistance of the University Grants Commission. So far 117 adult education classes have been run by the teachers and students in various urban and rural areas selected by the colleges. The total number of adults having benefitted by these classes is about 3,500 (2,600 males and 900 females). The NSS students along with their studies in the colleges are running these classes. They are also visited by the development officers of agriculture department, members of the taluka Panchayat and leading social workers.

The university organised eight college level and four university level training classes and seminars for the benefit of the NSS workers who were to participate in NAEP work. A conference of college teachers was organised in which surpunches, village workers and taluka and district development officials also participated. The adult education classes have been providing useful information and practical hints in regard to day-to-day life affairs like working in post office, bus travels, cooperative society, national saving schemes together with knowledge of three Rs. The adult education classes also supplement information received by adults through radio and newspapers.

Workshops held at BC Krishi Viswavidyalaya

The Bidhan Chandra Krishi Viswavidyalaya organised a training programme of the workers of voluntary agencies on crop production, animal production and treatment and fish production in collaboration with the Association of Voluntary Agencies for Rural Development. The training programme was attended by representatives of various voluntary organisations from Howrah, Midnapore, 24-Parganas, Hooghly, Bankura and Birbhum districts.

A rural journalists workshop was held at the communication centre of the university in collaboration with the Eastern India Centre for Mass Communication Studies. A large number of journalists participated in the workshop. It was felt that the rural newspapers/journals could play a vital role in the implementation of agricultural and rural development programme in the villages and they could also serve as source of feed back about the problems of rural life. Rural newspapers should be given more emphasis for regional development.

The university also organised a state level seminar on problems and prospects of Mushroom cultivation in West Bengal. The mushroom workers of Calcutta University, Jadavpur University, Visva-Bharati, State Agricultural Research Institute and Bidhan Chandra Krishi Vishwavidyalaya participated in the deliberations. It was recommended that the mushroom workers should intensify their work on the utilisation of various types of agricultural wastes for the production of spawns, on the methods of testing for the purity and quality of the spawns, on the low cost containers for the transportation of the spawns and on the protection and preservation of mushrooms. It was also recommended that further explorations were to be made to collect germplasms for domestication and evaluation. It was suggested that the research may be initiated on mutation and breeding for the improvement of existing cultivars. Attempt should also be made to develop high temperature tolerant cultivar of *Agaricus bisporus*. In the extension of technology of mushroom cultivation it was decided to give emphasis on the cultivation of *Pleurotus sajor-caju* with the small, marginal and tribal farmers, emphasis should be given on training and demonstration.

Journalism conference held at Varanasi

Mr. Justice A.N. Grover, Chairman of the Press Council of India, while inaugurating the first Indian Journalism Congress in Varanasi said that the Press was very largely owned by the organised corporate sector whose main capital base was a non-publishing business and commercial finance. Underlining the need for improving the standard of journalism particularly when catering to a pluralistic society with so many regional and language problems, Justice Grover said the growing tendency to give overwhelming prominence to political news rather than those concerning various other aspects of human activity should be curbed. What was dished out to the readers even by the leading newspapers does not come up to the standard which obtains in western democracies? He also understood the need to change and raise provisions of the Press and Registration of Books Act which was enacted over hundred years back not with the purpose of encouraging the growth of newspapers but with the intention of keeping the press under check. These provisions need a second look with a view to bringing them in tune with the changed time. Referring to the role of Press Council, he said that the Council was unique of its kind, driving the authority from an Act of Parliament, yet it had no punitive powers. The Council had been designed to function as an impartial arbitrator on issues affecting the free flow of information in general and the Press freedom in particular. It had also to check any abuse of that freedom with a view to maintaining and improving the standards of journalism in the country.

Harijan welfare cells in Karnataka Universities

The Karnataka Legislature committee on the welfare of the scheduled castes and tribes has suggested the creation of special cells in the universities to enforce the implementation of the reservation orders for these classes in the educational institutions. It has also suggested the appointment of special deans in the universities to look after the welfare of the scheduled castes and tribes students. The third report of the committee on reservation and employment of the scheduled castes and tribes and other welfare measures for them has revealed that the reservation for these classes was far from satisfactory and the candidates belonging to these classes were prevented from entering academic services in the universities. Their promotional opportunities were almost nil. Instances have come to the notice of the committee that such candidates having higher qualifications were being dubbed unsuitable for selection and appointment. Proper safeguards should be provided in recruitment rules as well as a high power follow-up machinery for enforcement of reservations. The committee pointed out that not even one Vice-Chancellor from these classes had been there for a number of years in any of the universities in the State. It recommended the creation of Ambedkar Chairs in Political Science in the other State universities as in the Karnatak University.

Department of Kannada in Bombay University

Dr. K. Sgivarama Karanth, an eminent writer and recipient of Bhartiya Jnana Peeth Award, formally inaugurated the Department of Kannada at the University of Bombay. The creation of the department is a result of an understanding between the Government of Karnataka and Maharashtra to have reciprocal chairs of Marathi and Kannada respectively. The chair for Marathi has already come into being in the Karnatak University. In his address, Dr. Karanth complimented the Bombay University for taking a step in the right direction as he felt that it would bring about a better understanding between the people living in the neighbouring States. He emphasised the need for language scholars to adopt a proper approach for making research in their subjects.

Prof. Ram Joshi, Vice-Chancellor of the University, said that the Department of Kannada would serve as an important centre for learning Kannada language and literature. He also announced that the university would soon create a full-fledged Department of Urdu.

Committee to review the functioning of JNU

Considering the fact that the Jawaharlal Nehru University, New Delhi has already functioned for a period of ten years and considering also the desirability of making an assessment of its working during this period with a view to planning its future development in keeping with the objectives of the university, the Executive Council of the university has appointed a Review Committee under the chairmanship of Dr. V.S. Jha, former Vice-Chancellor of Banaras Hindu University. The other members of the committee are : Dr. M.S. Gore, Director, Tata Institute of Social Sciences, Bombay; Prof. M.V. Mathur, Director, National Institute of Educational Planning and Administration, New Delhi; and Dr. M.S. Swaminathan, Secretary, Ministry of Agriculture and Irrigation. Dr. J.N. Kaul, Consultant, National Institute of Educational Planning and Administration will be the Member Secretary and Shri R.P. Puri, Deputy Registrar, JNU, will act as its official Secretary.

The terms of reference of the committee will be as under :

(1) To review the working of the university since its inception in the light of the objectives stated in the First Schedule of the Jawaharlal Nehru University Act;

(2) To assess the achievements of the university in the realisation of these objectives and to suggest steps necessary to consolidate and improve upon them;

(3) To note handicaps, shortcomings and failures in the academic and administrative functioning of the university, to ascertain the reasons thereof and to propose remedies necessary for a more effective functioning of university in future; and

(4) To recommend the lines of growth and development of the university in the next decade consistent with the objectives stated in the JNU Act.

The committee is expected to submit the interim report on question of urgent nature which may be referred to it and the final report would be submitted within a period of one year.

Nayudamma Committee submits reports on IITs

The setting up of a National Screening Committee for examining the proposals for foreign technical assistance to the Indian Institutes of Technology (IIT) and other academic institutions has been recommended by the Nayudamma Committee which has submitted its report to the Union Government.

According to the committee, proposals for foreign technical assistance or collaboration or aid received from the IITs and other academic institutions should not be considered in isola-

tion but should be examined on the basis of overall national perspectives and in relation to what was happening in other departments and agencies in the country.

It has also suggested that institutions of the same category like the IITs should consult each other and submit to the National Screening Committee coordinated and agreed proposals for foreign technical assistance or collaboration or aid.

The expertise available in the IITs to offer consultancy services should be fully utilised by the Educational Consultancy Company proposed to be set up under the auspices of the Union Government, according to another recommendation of the Committee. The need to establish in the IITs centres for assessment and transfer of technology has been stressed.

The forging of formal linkages by the IITs with other academic institutions, research and development organisations and national laboratories has been recommended by it.

The committee has taken note of a "remarkable increase in the number of research projects undertaken by IITs". At present the projects are done on a no-profit and no-loss basis. The committee has suggested that IITs may be allowed to generate funds from sponsored research programmes on the basis of norms of charges to be laid down by the appropriate authorities. Routine testing jobs in the name of consultancy should not be undertaken by IITs, the committee feels.

Development strategies ought not to be based on simply the availability of massive foreign technical assistance / collaboration aid but the programmes should be used "only on a selective basis for new and emerging areas, for interaction in areas of excellence and for procuring sophisticated equipment not available indigenously." In all cases, the proposals should be based on overall national priorities and commitments, the committee has pointed out.

It has pointed out that foreign technical assistance programme should not be "aimed at replacing existing indigenous endeavours but directed to strengthening and upgrading them."

The terms of reference for the Nayudamma Committee formed in 1978 included : a review and evaluation of foreign technical assistance so far received by IITs; assessment of the capabilities developed in the IITs with such assistance/aid, and identification of areas requiring further development and support through foreign technical aid vis a vis the emerging areas and national perspectives. Other academic institutions were included subsequently in the coverage.

The committee has pointed out that the foreign inputs into other academic institutions other than IITs have been comparatively small and no indepth study in respect of such institutions has been attempted.

The Committee's report is now under the consideration of the Union Government.

The IIT Kharagpur, is the oldest of its kind in India, having been established in 1950. The IITs in Bombay, Madras, Kanpur and Delhi, were established in 1958, 1959, 1960 and 1961.

The foreign component of the equipment received by the respective IITs amounts to nearly Rs. 107 lakhs, Rs. 231 lakhs Rs. 1046 lakhs, Rs. 373 lakhs, and Rs. 623 lakhs, making a total of nearly Rs. 2,380 lakhs. The corresponding Indian capital input (for non-recurring items like land, buildings, equipment, library etc, amounts to nearly Rs. 1258 lakhs, Rs. 907 lakhs, Rs. 1400 lakhs, Rs. 1346 lakhs and Rs. 900 lakhs respectively, making a total of Rs. 5810 lakhs. A foreign technical aid worth Rs. 395 lakhs is also now in the pipeline for all the IITS.

New campus for Calcutta University

The West Bengal Government has decided to hand over 12 acres of land of the Alipore Special Jail to the Calcutta University to build up a new campus of the university. The Chief Minister, Mr. Jyoti Basu, is expected to lay the foundation stone of the new campus at a function to be held some time in April, 1980. Mr. P. Sur, Minister for Urban Development said that initially five acres of land would be utilised for this purpose and the Economics Department would be shifted to the new campus. The Minister said that the new campus of the university would be contiguous to the National Library.

BHU to confer honorary degrees

Mother Teresa is among sixteen people to be awarded a doctorate (honoris causa) at the 61st annual convocation of the Banaras Hindu University. Mother Teresa will be awarded the doctorate for her outstanding contribution in the field of selfless service to suffering humanity.

BHU will be holding the convocation for the first time after a lapse of eight years. Among those to be awarded Mr. J.R.D. Tata, industrialist; Dr. D.S. Kothari, former Chairman, UGC; Mr. Rai Krishna Das, art critic; Pt. Ravi Shankar, Ustad Bismillah Khan, Mrs. M.S. Subbulakshmi, Satyajit Ray and Mr. Maqbool Fida Hussain. Dr K.L. Wig and Mr. M.N. Dastoor will also be awarded Doctor of Science (Hon. Causa) separately by the Medical Institute and the Institute of Technology of BHU.

Nehru Award for five Scientists

Five agricultural scientists have been awarded the Jawaharlal Nehru award for outstanding postgraduate research work in 1979-80. They are: Dr. Baljit Singh and Dr. Manjit Mahal, both of Punjab Agricultural University; Dr. P. Sen of Central Rice Research Institute, Cuttack; Dr. Hari Shankar of Indian Veterinary Research Institute, Izatnagar; and Dr. K.P. Joy, a fisheries scientist.

These scientists will be given a cash award of Rs. 5,000 each and a citation.

Merit grant for St. College

St. John's College, Agra, one of the oldest educational institutions in Uttar Pradesh, has been awarded merit grant of Rs. 10,000 by the State Government this year. The college has earned similar grant for the last eleven years. This grant has been given as a token of appreciation of the good work done and the high academic standards maintained by the college in the past.

Health University for Karnataka

The Karnataka State Health Minister, Mr. Abdul Samad, said in Bangalore that the State would have a health university very soon. The Government had taken informal decision to start the health university from the coming academic year. The Minister said that he would be seeking the permission of the Union Government.

XXVI All India Library Conference held in Delhi

The Twenty-sixth Conference of Indian Library Association was held from March 6 to 9, 1980 at Pragati Maidan, New Delhi, at the time of the IVth World Book Fair. A large number of librarians, publishers, booksellers and book lovers attended the session. The library services for a developing society and the impact of rising prices of books of the development of libraries were the main topics for discussion.

The conference was inaugurated by Justice V.S. Deshpande, Chief Justice of Delhi High Court. Shri K.R. Narayan, Vice-Chancellor, Jawaharlal Nehru University, New Delhi, delivered the keynote address. A souvenir was also brought out on this occasion.

Justice Deshpande in his address highlighted the lack of library facilities in rural areas where 80 per cent of the population lived. He pointed out that it was necessary for the progress and effective functioning of democracy to disseminate knowledge and information by assuring regular supply of books, journals and newspapers to the common man. He said that the contents of these publications should be such as to serve the needs of the people to the maximum. The libraries can discharge an effective role in this direction. A scientific temper had to be created in the people in respect of agriculture, animal husbandry, horticulture and other related items. He was sure that once the number of library units in rural areas became large, small printing presses as domestic industries could also be established and publications could be brought out conveniently in rural areas without much difficulty. These would reflect the local aspirations and grievances of the people and generate discussion and social awareness among the rural masses which will ultimately help in the formation of vigilant public opinion. He said that there was a need in both urban and rural areas for libraries to stock and supply a large number of copies of textbooks, dictionaries and other such material required by the students. He said even he had as a student faced the problem of getting textbooks. He said that the libraries should pay special attention to the needs of women and young children.

Shri K.R. Narayan in his address regretted the cut effected by the University Grants Commission in the library funds. He said that growing materialism coupled with an anti-intellectual wave particularly in politics and higher services were responsible for the lack of interest in gaining more knowledge. He pointed out that a recend survey of libraries had revealed that 70 to 80 of their books had never been taken off the shelves.

He said that the library was a power house of ideas. Even Karl Marx conceived his concept of a world revolution in the dim light of the British Museum library. Mao too had spent hours in the Beijing (Peking) library and went a step further by falling in love with the librarian's daughter and marrying her. He said that reading was a creative exercise, an interaction between the mind and the thoughts, ideas and passions expressed in the cold print of books. He decried the lack of publications in Indian languages.

Shri P.V. Narasimha Rao Union Minister of External Affairs in a written message to the conference said that the urgent need of the hour was service to the rural areas and libraries should maintain a vital link with our schemes for adult education and non-formal education.

About thirty-five papers were presented by the delegates coming from the various parts of the country. Dr. Amrik Singh, Secretary, Association of Indian Universities, Mr. M.N. Nagraj, Deputy Librarian, National Library, Calcutta and Dr. Malcolm Adiseshiah MP, were among those who participated in the deliberations of the conference.

The conference while discussing the impact of rising prices of books on the development of libraries suggested that a formula be evolved by which library authorities or fund giving bodies should agree to augment the year to year book budgets in direct proportion to the rise in the prices of books. In other words, library budgets should be directly linked with the cost of production of books and prevailing prices. It was also unanimously agreed that a national forum be set up where publishers, booksellers, librarians and other readers could meet to discuss their problems relating to books production, quality of books, availability of paper and subject matter of new books. It was pointed out that the national book development council set up by the government had not met even once and the absence of a national policy also seriously affected the growth and development of a library system.

The rise in book prices was a

matter which concerned all library managers, irrespective of the fact whether they managed college, university, public, technical or special libraries. It was necessary to provide information about book prices so that the librarians could plan their budget accordingly. During recent years there has been a marked reduction in the outlay of higher education and library grants in universities and colleges. This trend had to be checked in the interest of developing libraries and providing better facilities to the students.

On behalf of the publishers, Mr. O.P. Ghai of the Federation of Indian Publishers pointed out that publishers could also not get any loans or financial assistance from the banks or other institutions. Book publishing, he said, was considered to be an unproductive activity and that is why adequate financial assistance was not being provided for it. The cost of producing books can be reduced considerably if the publishers made use of the letter press instead of other costlier methods of printing. Efforts should also be made to procure good quality paper at regulated prices in order to check rise in book production.

Workshop on computer techniques in Information Processing

A six day Workshop on the aforesaid topic organized by the Department of Library Science, University of Delhi, with the financial assistance from Department of Science & Technology, Government of India, was inaugurated by Prof. U.N. Singh, the acting Vice-Chancellor, University of Delhi, at 10.30 A.M. in the Tagore Hall, Tutorial Building, University of Delhi. The inaugural function was attended by about 150 people including participants, academicians, prominent library and information scientists from various parts of the country. About 25 participants are attending the Workshop representing various institutions, libraries and library schools and computer centres, from all over India.

The programme of the Workshop includes about 15 lectures and 3 panel discussions and 3 visits to computer and information centres in Delhi. The lectures and panel discussions will include various topics pertaining to application of computer techniques, their utilization, systems techniques, various methods of computer programming and languages, computer application at national and international levels, Government policy regarding application and use of computers in India and financial implications. The prominent lecturers have been invited who have specialised in the various topics to be covered.

While inaugurating the Workshop, Professor U.N. Singh outlined the objectives of University education, traditional techniques of communication of information, origin of writing and printing and stressed that the modern techniques including computers have come to the rescue of information scientists who have to control the unlimited flow of information in various branches of knowledge. He also stressed that such a Workshop would prove to be a boon to the working information scientists and teachers and such a programme should have been organized much earlier. However, he was highly appreciative of the efforts made by the Department of Library Science and for the financial assistance provided by the Department of Science & Technology, Government of India.

Dr. B.M. Bhatia, Principal, Hindu College and a prominent economist, was highly appreciative of the need for more mechanical devices to be supplied by the modern librarians for collection, storage and dissemination of required data and information in science and technology and in social sciences as well. He further stressed that the present day libraries especially in social sciences, find it very difficult to handle the modern flow of information in the social sciences without the use of computers. He further stressed that such programmes are not only highly academic but useful for the economic development of the nation as a whole.

BITS celebrates International Women's Day

The Community Welfare Unit of Birla Institute of Technology and Science, Pilani organised a function on 8 March, 1980 to celebrate the International Women's Day. The occasion was also used to eulogize the services rendered for the emancipation of Indian women by the renowned poetess, Smt. Sarojini Naidu, whose birth anniversary fell recently. Besides a message from Dr. C.R. Mitra, Director and short speeches on her life and poetry by Smt. Pushpa Bhargava and Smt. Meera Banerji, a number of her well-known poems were recited by students and faculty members. In her Presidential remarks Dr. (Smt.) Sandhya Mitra referred to the important role Indian women had played in Freedom Movement and to the contribution they had made for the progress of the country after Independence. She advised women to cultivate 'inner beauty' and gave the example of Smt. Naidu "who had charmed her way through life."

Personal

1. **Shri Girish Chandra Chaturvedi has taken over as Vice-Chancellor of Gorakhpur University.**
2. **Dr Kartar Singh Chela has joined as Director of Extension Education of Punjab Agricultural University in place of Dr J.C. Bakshi who has left to take up his new assignment with the Food and Agriculture Organisation (F.A.O.).**

ICAR organises Summer Institutes

The Indian Council of Agricultural Research will be holding 23 summer institutes in the various agricultural science during the summer vacations 1980 for the benefit of teachers, research workers and extension workers particularly the subject matter specialists. The main objective of this inservice training course would be to communicate the latest technological advances in the subject and provide the necessary orientation to teachers and research workers of agriculture/agricultural engineering/animal sicence home science/fisheries so that they are able to relate the teaching of their subject to the problems in their respective subject. The Council would be willing to accommodate one or two from the sponsored list of teachers, researchers and extension specialists from universities/colleges/institutes/departments who are actively engaged in teaching/research or extension education in the respective subjects. Sponsored candidates should not however be over 45 years of age on July 1, 1980.

The details of the summer institutes proposed to be organised are given as under :

ANNEXURE I

S. No.	Topic	Name of the Director	Location	Date of Summer Institute	Eligibility qualification
1.	Forage crop improvement and pasture management	Dr. A.K. Sanghi Research Scientist, Head of the Division, Forage Research Project, GAU, Anand	Anand Campus B.A. College of Agri. GAU, Anand-388110	12th May to 10th June, 1980	M.Sc. in Plant Breeding and Genetics/Agronomy having two years experience of teaching/ research or Ph.D. in Plant Breeding / Genetics / Agronomy. Research publication in the field of specialisation will be an additional qualification.
2.	Advanced Technology of potato production storage and utilization	Dr. B.B. Nagaich Director, CPRI Simla	Central Potato Res. Institute Simla-171001.	2nd June to 30th June, 1980.	M.Sc. (Ag.) with at least two years experience of research/teaching/extension in potato production.
3.	Weed Management in cropping systems	Dr. U.C. Upadhyay Dean, Agril.	Marathwada Agricultural University, Parbhani-431202	19th May to 10th June, 1980	Post-graduate in agronomy with two years experience of teaching or research work in weed management.
4.	Management of zones in India	Dr. R.P. Singh Chief Scientist CAZRI	Central Arid Zone Research Institute, Jodhpur-342001	28th April to 27th May, 1980	Post-graduate degree in any branch of agriculture science with minimum of 3 years experience of teaching/research/extension. Preference will be given to candidates who are directly associated with teaching/research/ extension on problems relating to development of arid region.
5.	Techniques for collection, maintenance and conservation of germplasm and collection of agricultural/horticultural plants	Dr. K.L. Mehra, Director, N.B.P.G.R., FCI Building, New Delhi-110012	National Bureau of Plant Genetic Resources, New Delhi-110012	12th May to 10th June, 1980	M.Sc. in Agricultural Botany with specialisation in plant breeding and genetics and economic Botany/Texonomy.

S. No.	Topic	Name of the Director	Location	Date of Summer Institute	Eligibility qualification
6.	Techniques in Soil fertility evaluation	Dr. N.G. Parur, Director of Instruction (Agri.) Agri. College, Hebbal, Bangalore-560024	Deptt. of Chemistry and Soil, UAS, Bangalore 560024	5th May to 3rd June, 1980	Post-graduate qualification in soil science/agronomy or other branches of related fields with two years professional experience in soil fertility evaluation.
7.	Use of Radio-isotopes in plant physiology	Dr. D. Sharma Prof. College of of Basic Science and Humanities	College of Basic Sciences & Humanity, G.B. Pant University of Agril. & Technology, Pantnagar-263145	To be announced later	Post-graduate qualification in any branch of agriculture with two years experience in use of radio isotopes
8.	Management of Soil borne diseases	Dr. R.S. Singh Prof. & Head Deptt. of Plant Pathology	Deptt. of Plant Pathology, G.B. Pant University of Agri. & Technology, 263145 Pantnagar	16th June to 15th July, 1980	Under-graduate or Postgraudate teachers, research workers with M.Sc. Agriculture in Plant Pathology or related field. At least two years experience in teaching/research.
9.	Recent advances in Soil Clay minerology	Dr. G.S.R. Krishnamurthi, Head Physics Division, I.A.R.I.	Agril. Physics Division, IARI, New Delhi-110012	6th May to 5th June, 1980	M.Sc. in Soil Science with at least 3 years experience in the field of soil clay minerology preferably Ph.D. in soil science.
10.	Phyto-pathological techniques/ teaching methods in plant pathology	Dr. J.N. Chand, Prof. & Head Faculty of Agril. Dept. of Plant Pathology. HAU, Hissar.	Faculty of Agriculture Deptt. of Plant Pathology, HAU, Hissar-125004	5th June to 2nd July, 1980	M.Sc./M.Sc. (Ag.) in Plant Pathology with at least two years experience in teaching, research, extension in any branch of the Plant Pathology.
11.	Restructuring of Extension teaching for integrated rural development and recognised extension system	Dr. K.N. Singh Director Co-Director Dr. S.N. Singh	Agricultural Extension Division, IARI, New Delhi-110012	14th May to 3rd June, 1980	Assistant Professor or Extension Education/Rural Sociology/Home Science extension/educational psychology. Teaching/research of at least five years in the subject mentioned above. Field experience in extension of at least two years desirable.
12.	Integration of research in the area of home science planning implementation and evaluation	Dr. (Mrs.) P. Pushpamma, Dean, Home Sciences, APAU, Hyderabad	College of Home Science APAU, Hyderabad-500030	15th May to 15th June, 1980	M.Sc. (Home Science) or staff of Home Science colleges. Qualification may be relaxed to B.Sc. Home Science with exceptional good teaching/research/extension experience in home science of minimum 5 years.
13.	Post Management in Cereals, millets and pulses.	Dr. B.H. Krishnamurthy Rao, A.P.A.U. Hyderabad.	College of Agril. Rajendranagar Hyderabad-500030	13th May to 6th June, 1980	Post-graduate qualification in entomology and related field with two years research/teaching/ extension work in the field of entomology.

S. No.	Topic	Name of the Director	Location	Date of Summer Institute	Eligibility qualification
14.	Advanced Statistical methodology, as applied to animal sciences.	Dr. K.C. Raut, Head, Division of Statistical Research.	IASRI, Library Avenue, New Delhi-110012	6th May to 4th June, 1980	Master's degree in agriculture statistics or equivalent qualification from a university or recognised institute or master's degree in mathematics with statistics followed by one year professional course in statistics of a recognised institute in agricultural statistics of the IASRI. At least 3 years experience in *teaching statistical techniques* as applied to animal science or handling survey / experimental data on animal sciences.
15.	Quail Production Management and Marketing	Dr. B. Panda, Officer on Special Duties, CARI, Izatnagar	Central Avian Research Instt., Izatnagar-243122	1st May to 30th May, 1980	M.V.Sc. or M.Sc. in Biology science or M.V.Sc./M.Sc. in animal husbandry/animal sciences with at least two years experience in teaching or research in poultry production.
16.	Buffalo Management System	Dr. R.N. Pal, Prof. Deptt. of LPM & Dean P.G. Studies, Hissar	Deptt. of Livestock Production and Management, Hissar-125004.	2nd June to 30th June, 1980	Teaching/research/extn. workers in the Department of livestock production and management/ dairy husbandry/animal husbandry with Master's degree in the subject.
17.	Dairy Economics	Shri Kuber Ram Head, Economics Dvn. NDRI, Karnal	Economics Division NDRI, Karnal (Haryana)	2nd June to 30th June, 1980	M.Sc. in Dairy Economics, M.Sc. Agri. Economics/M.A. in Economics with specialisation in agricultural/dairy economics or any other equivalent qualification. Experience of teaching and research in the field of dairy/ agricultural economics.
18.	Production Diseases with special reference to Ruman Dysfunctions in bovines	Dr. S.K. Misra, Prof. & Head, Deptt. of Veterinary Medicine, PAU, Ludhiana	College of Vaterinary Science, PAU, Ludhiana	14th July to 28th July, 1980	Teachers having M.V.Sc and M.Sc. degree in veterinary medicines.
19.	Recent advances in drying and dehyderation of food products	Dr. B.P.N. Singh Prof. of Agril. Engg., G.B. Pant University of Agri. & Technology, Pantnagar	G.B. Pant University of Agri. & Technology Pantnagar-U.P. 263145	9th June to 28th June, 1980	Degree in any discipline of engineering or M.Sc. Food Technology with two years experience related to teaching/research or industry in the area of food product processing.
20.	Role of physiology in animal production	Dr. N. K. Bhattacharya Head of the Division, Physiology & Climatology, IVRI Izatnagar	IVRI, Izatnagar U.P. 243122	5th May to 3rd June, 1980	In service teachers/researchers with the qualification of M.V.Sc. in Animal Physiology / Animal nutrition/livestock / production/ animal production animal bio-chemistry.

S. No.	Topic	Name of the Director	Location	Date of Summer Institute	Eligibility qualification
21.	Prevention & Control of Genetics infection of cattle, buffalo, sheep & goat	DR. R. C. Pathak, Prof. & Head Deptt. of Bacteriology College of Veterinary Science and Animal Husbandry (C.S.A.U. & T. Kanpur) Mathura Campus Mathura	Chandra Sekhar Azad Univ. of Agri. & Technology Mathura Campus Mathura U.P.	15th June to 15th July, 1980	M.V.Sc in the subject of veterinary bacteriology verterinary pathology, veterinary gynaecology or veterinary medicines, with experience in related field.
22.	Culture of edible molluses	Sh. K. Nagappan Nayar, Sr. Scientist & Officer-in-Charge Tuticorin Res. Centre IMFRI, Cochin	Tuticorin Research Centre, CMFRI, 93 North Beach Road, Tuticorin-622000.	26th May to 24th June, 1980	M.Sc. in Zoology with specialisation in fisheries with two years experience.
23.	Brackish water capture & culture fisheries	Dr. A. V. Natrajan Director (Offtg.)	CIFRI, Barrackpore 24-Parganas (WB) 743101	3rd July to 2nd August, 1980	M.Sc. in Zoology or equivalent qualification with fishery biology / aqua - culture / fish and fisheries as special paper and two years experience in teaching/research in selected fields.

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Anthropology

1. Bhupinder Singh. Tribal leadership in Orissa. Utkal University.

Psychology

1. Asha, C.B. An empirical study of the adjustment problems of creative children in secondary schools. University of Kerala.

2. Nagpal, Ashok. Effectiveness of punishment procedure indiscrimination learning process of the mentally retarded and its relation to some personality aspects. University of Delhi.

3. Sharma, Satish Chandra. Correlates of creative functioning in high and low caste groups. Meerut University.

4. Singh, Lal Amrendra. Bhartiya manovigyan kee siddhantik pristhabhoomi. (Hindi). Avadh University.

Sociology

1. Biswas, Ajoy Kumar. Role of leadership in technological change: A sociological case study of a rural region in West Bengal. University of Kalyani.

2. George, Mollykutty. A study of the influence of modernisation on fertility of urban women. University of Kerala.

3. Jaiswal, Rajendra. Shikshit yuvkon ka adhunikkaran: Poorbi Uttar Pradesh ke chuney gaye prakhandon ka ek samaj manovaigyanik adhyayan ((Hindi). Avadh University.

4. Kachole, Dadarao Dhondiba. Mang community in transition. Marathwada University.

5. Misra, P.S. Changing patterns of village families: A sociological analysis. University of Gorakhpur.

6. Nagaraj Rao, Ratna. Social organisation in an Indian slum. University of Poona.

7. Roy, Subhransu Kumar. A sociological study of the factors affecting human satisfaction in industries. University of Kalyani.

8. Vishvanathan, Siva Prasad. Scientists in organization. University of Delhi.

9. Vyas, Kailashnath Indernath. Tribals in non-tribal setting: A sociological study of tribals in an urban community. South Gujarat University.

Political Science

1. Alexander, P.J. Police administration in Kerala: A developmental approach. University of Kerala.

2. Asthana, Sant Prasad. The Prime Minister of India: A constitutional and political study. University of Gorakhpur.

3. Auti, Vidyadhar Bhaskar. A comparative study of urban and rural political participation : An empirical study of local communities in Maharashtra. Shivaji University.

4. Barooah, Dipti Prasad. Administration of community development and Panchayati Raj in the Darrang District. Gauhati University.

5. Bhagdikar, Krishan Khanderao. Administrative policies of King Bhoja Paramara with special reference to his Yuktikalpataru. Nagpur University.

6. Datye, Sunil Narayan. Politics in Marathwada: A study of political development from 1948-72. University of Poona.

7. Haranath, Vadrevu Sree Kusuma. The Supreme Court of India 1950-73: An empirical analysis of judicial behaviour. Andhra University.

8. Jadhav, Jeevaji Basavantrao. Functioning of financial committees of Maharashtra Legislature. Shivaji University.

9. Pandey, Babu Ram. Bangla Desh ka muktee sangharsh 1971: Ek bhoo stratijiya evam rajnaitak adhyayan (Hindi). Avadh University.

10. Sen, Uttam. Centre-state financial relations in India with special reference to West Bengal. University of Calcutta.

11. Sharma, Urmila. Samakaleen Bharatiya rajnitik chintan mein manavvad: Ek samikshatmak vivechan Shri Aurobindo se Nehru tak. (Hindi). Meerut University.

12. Veena Kumari. Socialist ideology and programmes of the Indian National Congress. Meerut University.

Economics

1. Bandyopadhyay, Shibdas. Some economic aspects of paddy cultivation in West Bengal. University of Kalyani.

2. Bhatia, Satya Paul. Land reforms in India: A comparative study. Meerut University.

3. Gupta, Vipin Chandra. Role of small scale industry in industrial development of U.P. since 1951. Kanpur University.

4. Gyanendra Kumar. Demographic factors and economic growth : A case study of India. Meerut University.

5. Jadhav, Ramesh Keshavrao. Scheduled castes in Maharashtra: A study in their socio-economic disabilities. Shivaji University.

6. Satyanarayan, Timmaraju Malati. A study of the transport equipment industries in India, 1951-77. University of Poona.

7. Singh, Kiran. Trends in industrial concentration in India and policy implications. University of Delhi.

8. Singh, Satya Bir. Role of Life Insurance Corporation in the economic growth of India. Meerut University.

Education

1. Ahmad, Sultana. An empirical study of the effect of socio-cultural disadvantage on intellectual growth among Eastern U.P. students. University of Gorakhpur.

2. Dwivedi, Mahabal. A study on the attitudes of students, parents and teachers towards the current system of higher education. University of Gorakhpur.

3. Ghosh, Nani Gopal. Distribution of four social values among certain selected strata of youths and prediction of good citizenship with the help of the values. University of Kalyani.

4. Joshi, Shriniwas Diwakar. Educational problems of the scheduled castes and scheduled tribes of Baroda District. M.S. University of Baroda.

5. Kadiyal, Ramchandra Anant. A critical study of the contribution of Karmaveer Dr. Bhaurao Patil to the educational thought, practices and development of education in the State of Maharashtra . Shivaji University.

6. Latkar, Shakuntala Chintamani. Basic vocabulary in Marathi of pupils in Standard Seven. University of Poona.

7. Misra, K.N. A study of the educational system during the Upanishadic age of India. University of Gorakhpur.

8. Pachauri, Girish Chandra. A study of the relative effectiveness of different styles of programmed learning in Hindi grammar. Meerut University.

9. Sharma, Brijkishore. A study of certain aspects of verbal and non-verbal behaviours of science teachers on the micro and macro-teaching situations using interaction analysis. Avadh University.

10. Shyam Kumari. Problems of women education and their impact on its progress in East U.P. at the secondary level since 1947. University of Gorakhpur.

11. Singh, Ram Deo. Stimulated social skill training and

modification of teacher class-room behaviour. University of Gorakhpur.

12. Sivadasan, K.R. Group behaviour of pupils and the attainment of educational objectives in secondary schools. University of Kerala.

13. Vidyarthi, Shankar Lal. A study of the problems of retired primary and higher secondary school teachers of Basti District, 1960-75. University of Gorakhpur.

14. Yeli, Rudramuni Shivayogeppa. A critical study of pre-primary education in Karnatak. Karnatak University

Commerce

1. Kulkarni, Sharad Digamber. Working and problems of passenger road transport in Maharashtra. University of Poona.

2. Misra, Radha Nath. Problems of rural industrialization in the small scale sector in Orissa : A study of Panchayat Samiti industries. Karnatak University.

3. Paila, Subba Rao. A study of personnel, union management relations in Shri Shahu Chhatrapati Mills: A government of Maharashtra Undertaking, Kolhapur. Shivaji University.

4. Panda, Ghana Shyam. Working capital in small manufacturing companies in Orissa. Sambalpur University.

5. Shetti, Chintaman Shankar. Operations of the Unit Trust of India, 1964-65 to 1973-74. University of Poona.

6. Sushil Kumar. Human relations in the private sector: A case study of Modi Spinning and Weaving Mills Co. Ltd. Meerut University.

HUMANITIES

Philosophy

1. Donald, J. Robert. Philosophical perspectives of humanistic psychology. University of Poona.

2. Padhi, Narayan Chandra. Doctrine of Karma. Utkal University.

3. Pande, Krantiprabha Purushottam. Critical examination of Kant's aesthetics with reference to beautiful. University of Poona.

Religion

1. Faruqi, Imadul Hasan Azad. The Tarjumanal Quaran: A critical analysis of Maulana Abul Kalam Azad approach to the understanding of the Quaran. Jamia Millia Islamia.

Linguistics

1. Gandhe, Vasudha Sudhakar. Semantics of words denoting four-footed (Domestic) animals in Vedic. University of Poona.

2. Paigaonkar, Aruna. Use of mass media for second language teaching in India with special reference to radio and television. University of Poona.

Literature

English

1. Dani, Ashok Pandurang. Dryden's tragicomedies. University of Poona.

2. Ishakali, Shabbir Hussain. An investigation into the reading efficiency in English of students of standard XI in Aurangabad City and measures to improve it. Marathwada University.

3. Ramakrishna, D. Craft of Poe's tales. Kakatiya University.

4. Sharma, Kaushal Kishore. Theories of the English novel since 1914: D.H. Lawrence, Virginia Woolf, E.M. Forester, Somerset Maugham and Joyce Cary D. Litt. Meerut University.

5. Sharma, Vinod Bala. Prefaces of Bernard Shaw: An evaluation. Meerut University.

German

1. Karnick, Kamal Kashinath. Bonsels' Indienbezogene Werke. University of Poona.

Sanskrit

1. Abe, Join. A study on the first and second chapters of the Visuddhimagga and its commentaries. University of Poona.

2. Awasthi, Krishan Kumar. Jagdish Bhatt kee shabd shakti prakashika: Ek adhyayan. Kanpur University.

3. Bhat, V.M. Purushottamdevni laghuparibhasha vruttinu vivechanatmak adhyayan. Gujarat University.

4. Chakrawarti, Shanti. Dharamsutron mein jiwan evam naitik mulyon ka adhyayan. University of Gorakhpur.

5. Dei, Ram Janki. Vedon mein som-sukt. University of Gorakhpur.

6. Deshpande, Mandakini Ramchandra. Puran saraswatiyancha tikancha chakitsik abhyas. University of Poona.

7. Dwivedi, Vishwambhar Nath. Gita kee vividh vyakhyaon kee aitihasik evam tulnatmak samiksha: Shankar, Ramanuj, Tilak, Gandhi, Vinoba evam Radhakrishnan ke vicharon ka vishesh adhyayan. Kanpur University.

8. Kshatri, Kiran Lata. Prakriya Komudi tatha Siddhant Komudi ka tulnatmak adhyayan. Kanpur University.

9. Pandya, H.U. Jain sammat Ghancharcha Visheshtahmatay-Giri krut nandi tikane adhare. Gujarat University.

10. Patel, J. S. Vadibhsinh Surikrut Gadya Chintamani: Vivechanatmak adhyayan. Gujarat University.

11. Rai, Vibhuti Narain. Sanskrit ke prakaranon ka tulnatmak adhyayan. University of Gorakhpur.

12. Shukla, Kapil Deo. Aapastamb Shrot Sutra ka alochanatmak adhyayan. University of Gorakhpur.

13. Sneh Lata. Mandormanjari ka alochanatmak evam tulnatmak adhyayan. Meerut University.

14. Tripathi, Ramhit. Varahshrot Sutra ka parisheelan. University of Gorakhpur.

15. Tripathi, Vishal Prasad. The concept of Maya in Kashmiri Shaivism and Vedanta. University of Delhi.

16. Vechalekar, Arundhati Madhav. A critical study of the Chandogyopanishad. University of Poona.

Hindi

1. Awasthi, Promila. Biswin shatabdi ke Hindi Ramkavya kee sanskritik prishtbhoomi. Kanpur University.

2. Bajpai, Vijay Shankar. Gwalior zile kee boli ke sanrachnatmak gathan ka shastriya adhyayan. Kanpur University.

3. Bhatt, V.M. Swami Navrang aur unka sahitya. Saurashtra University.

4. Bimla Devi. Ritikaleen ritimukt kavya mein samajik chetana. University of Delhi.

5. Bisht, Sher Singh. Hindi Krishan kavya kee darshnik prishthbhoomi, san 1400 se 1600 tak. Kumaun University.

6. Chaudhari, Tejpalsingh Jaising. Khari Boli ka vyakarnik vishleshan. University of Poona.

7. Dhamija, Rajendra Kumar. Swatantaryottar Hindi natak ka shilp vidhan. Meerut University.

8. Dubey, Jagdamba Prasad. Sridhar Pathak: Ek mulyankan. Avadh University.

9. Gupta, Mitresh Kumar. Prasadottar aitihasik natakon ka adhyayan. Meerut University.

10. Gupta, Sadanand. Kalyan Sampadak: Shri Hanuman Prasad Poddar. University of Gorakhpur.

11. Irshad Ali. Purvanchal ke muslim lokgeeton ka adhyayan. University of Gorakhpur.

12. Janardan. Madhyakaleen Hindi sahitya ka itihas lekhan: Ek punarmulyankan. University of Gorakhpur.

13. Kakare, Satish Janardan. Vyakti aur samaj ke parasparik sambandhon ke sandarbh mein Amritlal Nagar ke upanyason ka anusheelan. Ravishankar University.

14. Kapil, Surendra. Mahakavi G. Kankar Kurup krit Okkawal (Malyalam) evam Mahakavi Sumitranandan Pant krit Chidambara (Hindi) ka tulnatmak adhyayan. Meerut University.

15. Karunakaran, K. A comparative study of folk poetry in Hindi and Malayalam literature. University of Cochin.

16. Kazi, Mohammed Husain. Dakhini Hindi ke shokgeet. University of Poona.

17. Mishra, Kailash Nath. Hindi kee anusandhan padhatiyon ka vaigyanik adhyayan. Kanpur University.

18. Mishra, Ramashankar. Nai kavita evam naye geet kavya ka tulnatmak vivechan: Vastu aur shilee shilp kee drishti se. *Kanpur University.*

19. Misra, Vindhyachal. Hindi ke Sudamacharit kavya: Ek vivechanatmak adhyayan. University of Gorakhpur.

20. Nigam, Pratibha. Bareli janpad ke lokgeeton mein sahitya ka swarup. Kanpur University.

21. Paliwal, Hradayesh Kumar. Hindi alochana aur manovishleshan. University of Delhi.

22. Pandey, Ram Bodh. Uttar Madhyayugeen sant sahitya 17th-18th A.D. mein Madhura bhakti ke tatwa. Avadh University.

23. Pandey, Suresh Chandra. Agyeya sahitya ke pashchatya prena strot. Meerut University.

24. Puranik, Vinod Pandharinath. Hindi sahitya ko Saraswati kee den, 1900-1920. University of Poona.

25. Randheer Singh. Chandayan ke lok prachalit evam sahityik katha rupon ka tulnatmak adhyayan. University of Gorakhpur.

26. Ransubhe, Suryanarayan Manikrao. Vibhajan aur *Hindi katha sahitya . Marathwada University.*

27. Saxena, Chitra. Ritikaleen Hindi kavita kee lok sangrahi bhoomika. Kanpur University.

28. Sethi, Jai Gopal. Shri Jagannath Prasad Milind ke sahitya mein vyakt rashtriya bhavana. Meerut University.

29. Sharma, Gita. Premchandottar Hindi upanyason per kavita ka prabhav. University of Delhi.

30. Sharma, Lalit Hari. Shabdavali ayog ke vaigyanik shabdavali ka adhyayan. Kumaun University.

31. *Sharma, Onkar Prasad. Mohan Rakesh tatha Balwant* Gargi kee natyakala ka tulnatmak adhyayan. Meerut University.

32. Sharma, Ramnath Ghurelal. Yugeen paripreksbya mein Kabir aur Akha ke kavya mein abhivyakt vichardhara ka tulnatmak adhyayan. M.S. University of Baroda.

33. Sharma, Shiv Shanker. Auchitya kavya siddhant ka manovaigyanik parisheelan. *D. Litt.* Kumaun University.

34. Shrivastava, Sudha. Mahadevi ke kavya mein bimbvidhan. Gujarat University.

35. Singh, Anirudh. Mahatma Banadas virachit Brahmayan granthon ka darshanik evam sahityik anusheelan. University of Gorakhpur.

36. Singh, Asha. Hindi mein Marxvadi alochana ka vikas. *University of Gorakhpur.*

37. Singh, Ram Sudhar. Nai kavita ke vikas mein lambi kavitaon kee bhoomika. University of Gorakhpur.

38. Singh, Sachchida Nand. Sathottar Hindi prabandh kavyon mein nayak kee parikalpana. University of Gorakhpur.

39. Singh, Udai Pratap. Aapa Sahib aur unkee kritiyan. University of Gorakhpur.

40. Sinha, Neelam. Sur sahitya per samikshatmak evam shodhakarya ka vivechanatmak anusheelan. Kanpur University.

41. Sinha, Sheela. Prasad ke natakon ka manovaigyanik adhyayan. Meerut University.

42. Srivastava, Asha. Hindi sahitya kee nirgunopasika kaviyatariyan. University of Gorakhpur.

43. Srivastava, Kanchan. Prabandh mulak Hindi Ramkavya mein Kaikayee, Kaushalya aur Sumitra ka charitrik vikas. Kumaun University.

44. Srivastava, Meena. Adhunik Hindi kavya mein natya tatwa. University of Gorakhpur.

45. Srivastava, Pushpalata. Hindi kavita mein mukt chand ka vikas. University of Gorakhpur.

46. Srivastava, Sneh Lata. 1935 ke bad Hindi natak kee naveen dishayen. University of Gorakhpur.

47. Tewari, Arjun. Purvi Uttar Pradesh mein Hindi patrakarita ka udbhawa aur vikas. University of Gorakhpur.

Urdu

1. Zaki, Sadiqa. Mohd. Mujeeb : Hayat aur Urdu khidmat. Jamia Millia Islamia.

Marathi

1. Apate, Lubdha Balwantrao. Mahatma Phule : Samajchintak ani vangmayeen karya. Shivaji University.

2. Damodar, Joshi Suresh. An exploratory study of the modern Marathi prose style with special reference to the prose in eassy, drama, novel etc. in the period 1850-1920. Karnatak University.

3. Deshpande, Krishnarao Pandharinath. Mahanubhayanchya sati granthcha chikitsik abhyas. University of Poona.

4. Dongre, Vinaya Vijay. Dvitiya mahayudhottar Marathi Kadambri: Swarup ani chikitsa. University of Poona.

5. Mancharkar, Ratnakar Bapurao. Kavivarya Mukteshwar: Vangmayeen abhayas. Shivaji University.

Bengali

1. Mukhopadhyay, Bimalkumar. Sahitya Tatwa samiksha. University of Calcutta.

2. Nandi, Ratan Kumar. Kartabhaja: Dharma-O-sahitya University of Kalyani.

3. Sarkar, Diptimoy. Origin and perspective of village folks in the novels of Bibhutibhushan. North Bengal University.

Gujarati

1. Parekh, A.J. Darshak Manubhai Pancholi: The creator and the thinker based on his work upto 1973. Saurashtra University.

Tamil

1. Parthasarathi, R. Vaishnavism in Tamil literature between the 7th and 9th centuries. *University of Delhi.*

Telugu

1. Narasimha Murty, Upadhyayula Appala. The theory of Auchitya and its application to Surana's poetry. Andhra University.

Fine Arts

1. Benerji, Bani Rajendranath. Dhrupad gayen shaili ka aitihasik vivechan. (Hindi). Nagpur University.

Geography

1. Banerjee, Sandhya. Problems of land use and urban development in Simla. Kanpur University.

2. Sharma, Arunima. Post independence changes in the morphology of Moradabad: A study in urban geography. Kumaun University.

3. Tripathi, Ram Lotan. Natural resources and prospects of industrial development in Bundelkhand Region of U.P. Kanpur University.

History

1. Arora, Ashok Kumar. Rajput-Maratha relations from 1707 to 1760 A.D. University of Poona.

2. Gavali, Papa Aba. Society and social disabilities under the Peshwas. Shivaji University.

3. Gayatri Devi. British Parliament aur Bharatiya swatantrata sangram, 1919-1937 (Hindi). Kanpur University.

4. Momin, Kamarali Noormohmed. Archaeology of Kheda District, Gujarat upto 1300 A.D. M.S. University of Baroda.

5. Pandey, Ajai Kumar. Study of labourers in early medieval India from 800 A.D. upto 1300 A.D. Avadh University.

6. Rao, Virendra Bahadur. Political history of Malwa, c. 550-1305. Gorakhpur University.

7. Shrikhande, Kamleskar Vinayak. Karveer Chhatarpati dusre Shivaji yancha kalateel rajkiya, samajik va arthik jiwanacha abhyas. (Marathi). University of Poona.

8. Singh, Narendra Kumar. Jai Prakash Narayan aur Bharatiya samajvadi andolan (Hindi). Meerut University.

9. Sonawane, Vishwasrao Hanamantrao. Archaeology of the Panchmahals upto 1484 A. D. M. S. University of Baroda.

JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI-67

Advertisement No. Aca. III/2/80

Applications are invited for the following posts :—

I. SCHOOL OF LANGUAGES :

Centre of African & Asian Languages :

1. Assistant Professor in Arabic

Qualifications :

Essential :

(a) Consistently good academic record with at least a high second class Master's degree in Arabic or its equivalent qualification from an Indian/foreign University;

(b) A doctor's degree or published work of an equally high standard.

Specialisation required :

Arabic Language & Literature.

Desirable :

Ability to teach translation and interpretation from Arabic to English and vice-versa at the M.A. level.

CENTRE OF GERMAN STUDIES :

2. Assistant Professor in German : (temporary against leave vacancy for about one year)

Qualifications :

(a) Consistently good academic record with at least a high second class Master's degree in German or its equivalent qualification from an Indian/foreign University; and

(b) A doctor's degree or published work of an equally high standard.

II. SCHOOL OF SOCIAL SCIENCES :

Centre of Social Medicine & Community Health

3. Assistant Professor in Social Sciences :

Qualifications : Essential

(a) Consistently good academic record, with at least a high second class Master's degree in Cultural Anthropology, Sociology, or Psychology, or its equivalent qualification from an Indian/foreign University; and

(b) A doctor's degree or published work of an equally high standard.

Desirable :

(a) A degree in Community Health; and

(b) Five years' research experience in Community Health.

III. SCHOOL OF COMPUTER & SYSTEMS SCIENCES

4. Assistant Professor

Qualifications : Essential

(a) Consistently good academic record with at least a High second class Masters' Degree in the appropriate discipline or an equivalent qualification from an Indian/Foreign University.

(b) A doctor's degree or published work of an equally high standard.

Area of Specialisation : Systems Programming

Desirable :

Some teaching experience; post doctoral research experience.

Provided that in the case of Assistant Professors if the Selection Committees are of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relax any of the qualifications prescribed in (a) above.

Provided further if a candidate possessing a Doctor's degree or equivalent research work is not available or is not considered suitable a person possessing a consistently good academic record (weightage being given to M. Phil or equivalent degree or research work of quality) may be appointed provided he/she has done research work for at least two years or has practical experience in a research laboratory/organisation on the condition that he will have to obtain a Doctor's degree or give evidence of research work of equivalent high standard within five years of his appointment, failing which he will not be able to earn future increments until he fulfils these requirements.

IV. SCHOOL OF INTERNATIONAL STUDIES :

CENTRE OF AMERICAN AND WEST EUROPEAN STUDIES :

5. Associate Professor/Fellow

Qualifications : Essential

(a) Consistently good academic record with at least a high 2nd class Master's degree in Political Science or History or its equivalent qualification from an Indian/Foreign University;

(b) A doctor's degree or published work of an equally high standard in the field of American Studies.

(c) About five years' experience of teaching and/or research in the field of American Studies.

Desirable :

Should be able to guide research in areas of Black Studies/20th Century American History/US Foreign Policy.

V. SCHOOL OF COMPUTER & SYSTEMS SCIENCES :

6. Key Punch Operators—two (one reserved for Scheduled Caste candidate)

Qualifications : Essential

Higher Secondary/Matriculation, experience in operating Electric Key Punching Machine (Numerical and Alphanumerical) and knowledge of handling Computer Input / Output work.

SCALES OF PAY :

1. Associate Professor/Fellow : Rs. 1200-50-1300-60-1900.
2. Assistant Professor : Rs. 700-40-1100-50-1600.
3. Key Punch Operator : Rs. 260-6-290-EB-6-326-EB-8-390-10-400.

Relaxation in any of the qualifications may be made (a) in favour of persons of eminence or of high academic/professional distinction, and (b) in exceptional cases where adequately qualified persons are not available but are otherwise found suitable for the respective positions. It will also be open to the University to consider the names of suitable candidates who may not have applied.

The selected candidates will be expected to participate in the teaching and research programmes in the concerned disciplines in other Schools of the University as well as in the programmes offered in their own Centres of Studies.

Normally appointment of Fellows is made on contract basis for a period ranging from one to three years.

Benefits of C.P. Fund-cum-Gratuity/ G.P. Fund-cum-Pension-cum-Gratuity are available as per University rules.

Persons already in employment should route their applications through proper channel.

Due consideration will be given to candidates belonging to SC/ST at the level of Assistant Professor.

For Key Punch Operator

(i) Age limit 35 years; relaxable by 5 years in respect of candidates belonging to Scheduled Castes & Scheduled Tribes/Ex-servicemen/Physically handicapped candidates.

(ii) Upto 1% of the vacancies are reserved each for deaf, blind and orthopaedically handicapped, in Group C & D (class III & IV posts).

Second class (mail) rail fare (both ways) will be paid to candidates invited to appear for interview from outstation by the shortest route subject to the production of rail receipt.

Applications separate for each post, on the prescribed form, obtainable free of cost from the University by sending a self-addressed and stamped envelope (affixing Postage Stamps worth Rs. 2.85) of 23 cm × 10 cm. size to the Deputy Registrar (Academic), Jawaharlal Nehru University, New Mehrauli Road, New Delhi-67, should reach him latest by **28th April, 1980.**

Candidates from abroad, applying for the faculty positions, may apply on plain paper, (but their applications should reach the University by the last date) furnishing all the relevant informations such as their name, date and place of birth, marital status, nationality; state of domicile; postal and permanent address: father's name and address; academic and professional attainments; full details of (a) publications, and (b) research projects undertaken; language(s) known; details of visits to foreign countries; and the names and addresses of at least two persons well acquainted with the candidates' professional work who should also be requested by the candidate to forward to the Deputy Registrar (Academic) confidential report concerning the candidate.

UNIVERSITY OF DELHI

Advt. No. Estab. IV/64/80 **Dated 12th March, 1980**

Applications on the prescribed form are invited for the following posts:—

Department	Designation
Political Science	One Professor
Zoology	(i) One Professor
	(ii) Research Associate
Education (C.I.E.)	(i) Two Readers
	(ii) One Lecturer (Geography)
	(iii) One Audio-Visual Assistant
Mathematical Statistics	(i) One Reader
	(ii) One Lecturer
Urdu	One Reader
History (South Delhi Campus)	One Reader (temp. upto 2-9-1981)
Mathematics	One Reader
Library Science	One Reader
Botany	(i) One Reader
	(ii) Two Lab. Attendants (temporary but likely to continue) Reserved—one for Scheduled Tribe and One for Ex-serviceman
	Note: General candidates may also apply. If suitable candidates are not available from the above category, the posts will be de-reserved.
Modern European Languages	One Lecturer in Italian
Modern Indian Languages	One Lecturer in Panjabi (temporary upto 19-1-1981).
Law-Centre-I	One Part-time Lecturer
Faculty of Management Studies	One Placement Officer
Physics	One Senior Technical Assistant (for Telescope) (Temp. but likely to continue).
History	(i) One Curator (Museum)
	(ii) One Museum Attendant
Delhi University Library System	5 Library Clerks (Reserved-2 for Scheduled Caste; One for Scheduled Tribe and one for Ex-serviceman)

Note: Completed applications for the posts of **Library Clerks only** may be sent to the Librarian, Delhi University Library System, University of Delhi, Delhi-7.

The scales of pay of the posts are:—

Professor—Rs. 1500-60-1800-100-2000-125/2-2500.

Reader—Rs. 1200-50-1300-60-1900.

Lecturer—Rs. 700-40-1100-50-1600.

Placement Officer—Rs. 1100-50-1600.

Research Associate

Consolidated emoluments as under :—

A : Rs. 1,000/- p.m. (Fixed)

B : Rs. 1,200/- p.m. (Fixed)

C : Rs. 1,400/- p.m. (Fixed)

On the recommendation of the Selection Committee.

Part-time Lecturer in Law

Rs. 500/- p.m. (fixed) for work-load ranging from 3—6 hours per week;

Rs. 750/- p.m. (fixed) for work-load ranging from 7—10 hours per seek.

Note: Part-time teachers in Law will be appointed initially for a period not exceeding one academic year which could be renewed after each academic year with the total tenure of appointment of an incubent not exceeding 5 years.

Senior Technical Assistant —Rs. 550-25-750-EB-30-900.

Audio-Visual Assistant—Rs. 330-480 (proposed to be revised to Rs. 425-15-500-15-560-20-640).

Museum Curator—Rs. 425-15-500-EB-15-560-20-700.

Library Clerk—Rs. 260-6-290-EB-6-326-8-360-EB-8-390-10-400.

Laboratory Attendant/Museum Attendant—Rs. 210-4-250-EB-5-270.

All posts except part-time Lecturer and Research Associate carry D.A., C.C.A and H.R.A. as admissible under the rules in force in the University from time to time.

ESSENTIAL QUALIFICATIONS FOR:

Professorships

A scholar of eminence.

Independent published work of high standard and experience of teachi2g Post-graduate classes and guidi2g research for a considerable period desirable.

Readership in Library Science

(i) A good academic record with first or high second class Master's degree in Library Science or Library and Information Science or equivalent qualifications.

(ii) 7 year's teaching experience to Post-graduate classes in Library Science preferably at the Master's level.

OR

5 year's teaching experience to the Post-graduate classes in Library Science plus five years administrative experience in a responsible professional capacity.

Readerships (other than Library Science)

Good academic record with first or high second class Master's Degree in the subject concerned with a Doctor's Degree or equivalent published work.

Independent published work (in addition to the published work mentioned above) with atleast 5 years' teaching experience in Honours/Post-graduate classes essential.

Lectureships: (other than Education)

Essential: Good academic record with a first or high second class Master's Degree or an equivalent degree of a foreign University in the subject concerned.

(**Note** : Second Class would mean atleast 50% marks in the subject or equivalent grade.)

Desirable:

(i) A Doctor's Degree or Evidence of Research work of equivalent standard in the subject concerned. (ii) Teaching experience of Degree/Post graudate classes.

Provided if a teacher is not a Ph.D./M. Phil./M. Litt. at the time of his/her appointment and does not qualify himself/herself for the award of Ph.D./M.Phil./M.Litt. Degree from a recognised University in a subject which is being taught by him/her within a period of five years from the date of his/her appointment or does not give evidence of research work within that period in the subject concerned, he/she shall not be entitled to any future increments after the expiry of the said period of five years till such time he/she fulfils the above mentioned requirements.

Lectureship in Education (Geography)

Good academic record with a first or high second class Master's Degree in Geography or equivalent degree of Foreign University in the subject and Degree or Diploma in Education.

Note: Second Class means atleast 50% marks in the subject or equivalent grade.

Part-time Lecturer in Law

Good academic record with first or high second class Bachelor's or Master's Degree in Law, practice at the Bar for atleast 5 years of which atleast 3 years should have been in the Trial Courts. Previous teaching experience desirable but not essential.

Research Associate

Consistently Good academic record with first or high second class (B+) Master's degree or an equivalent degree of a foreign University in Zoology.

Note: Initial appointment will be for a tenure period of 3 years, extendable by another 2 years only. In no case the tenure will extend beyong 5 years in all.

Audio-Visual Assistant

(a) Minimum Higher Secondary with Science subjects.

(b) Diploma or Certificate course in the use of Audio-visual equipment organised by N.C.E.R.T. or other recognised bodies.

Library Clerks

(a) Matriculation or Higher Secondary

(b) Experience/proficiency in one of the following areas for three years:
(i) Typing with minimum current speed of 35 w.p.m.;
(ii) Understanding of classification system;
(iii) Experience in preparing and filling of Catalogue cards;
(iv) Experience of accessioning work;
(v) Experience of Counter duties;
(vi) Knowledge of multiple languages.

(c) Candidates will have to qualify the General English Test and such other tests as may be held to assess their proficiency/experience in one of the qualifications mentioned under (b) above.

Laboratory Attendant
Should have passed Matriculation or an equivalent examination with Science subjects.

Placement Officer
Master's Degree in Business Management, Engineering, Technology, Arts, Science or in any discipline of social sciences such as Sociology, Economics, Commerce, Psychology, Social Work, etc. with familiarity in Business Management and/or Personnel Management.

Museum Curator
A good second Class M.A. Degree in Ancient Indian History and Culture (with specialization in Fine Arts) or Archaeology with considerable fields experience in Archaeology.

Museum Attendant
High School or Higher Secondary or its equivalent with some experience of working in archaeological excavations museum.

Senior Technical Assistant
B.Sc. with Physics as one of the subject.

SPECIAL/DESIRABLE QUALIFICATIONS

Professorship in Zoology
Specialization in any of the following:
1. Cell Biology
2. Comparative Animal Physiology
3. Developmental Biology
4. Endocrinology
5. Entomology
6. Fish Biology

Readerships in Education
Candidates should have specialized in one of the following areas :—
Educational Administration/Comparative Education/Teacher Education/ Guidance/Educational Psychology/ Philosophy of Education/Sociology of Education/Social Science Education/ Language Education/Science Education.

Readership in History (South Delhi Campus)
Medieval Indian History

Readership in Library Science:
(i) Ph.D. Degree or independent published work of high academic standard.
(ii) Ability to guide research in the subject.

Readership in Botany
Candidates should have specialization in one of the following fields :— Plant Morphogenesis/Population Biology/Experimental Embryology.

Lectureship in Education (Geography)
A Doctorate Degree or evidence of research work of equivalent standard in the subject concerned.
Teaching experience of Degree/Postgraduate Classes/Secondary School/ Training College.

Lectureship in Italian
Experience of teaching Italian literature of the twentieth century is desirable.

Part-time Lecturer in Law
Teaching experience or practice in Labour Law, Tax Law, Military Law, Law relating to Trade Marks, Copy Rights and Patents, Limitation and Arbitration and Civil Procedure.

Research Associate in Zoology
(1) Ph.D. degree from a recognised University or equivalent research experience as evidenced by publications.
(2) Specializations' Biological Chemistry, Cell Biology, Endocrinology, Entomology or Fish Biology.

Placement Officer
A person having industrial background or the knowledge of working of private and/or public undertakings or educational institutions with special reference to placement and training work will be given preference.

Audio-Visual Assistant
(a) Experience of teaching the use of Audio-Visual aids.
(b) Ability to attend to minor repairs.

Senior Technical Assistant
Working experience in an observatory.

Museum Curator
Ability to undertake independent field work, photography and drawing work.

Museum Attendant
Aptitute for further study.

Library Clerks
Preference sill be given to those who hold a Certificate in Library Science.

Laboratory Attendant
Should have worked in a Laboratory.

The prescribed application form can be had from the Information Section of the University either personally or by sending a self addressed envelope (size 13 cm X 28 cm.) with postage stamps worth **Rs. 2.85**.

The candidates will have to produce the original documents relating to their age, qualifications, experience, etc. at the time of interview.

Applications (separate for each post) accompanied by attested copies of Degrees, other certificates, marksheets, published research articles, etc. should reach the undersigned not later than **12th April, 1980**.

Note:—
1. It will be open to the University to consider the names of suitable candidates for teaching posts who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases, in respect of all teaching posts on the recommendation of the Selection Committee.
2. Canvassing in any form by or on behalf of the candidate will disqualify.
3. Candidates from outside Delhi, for teaching posts only, called for interview will be paid to and fro single second class rail fare.
4. The University reserves the right not to fill up any of the vacancies advertised, if the circumstances so warrant.

REGISTRAR

UNIVERSITY OF POONA

Applications are invited for the following teaching posts on or before **25th April, 1980.**

1. **Professor**: One each of Politics and Public Administration Philosophy and Physics (Temp.)
2. **Reader** : One each of Geography, Physical Chemistry (Temp.) and Law (Temp.)
3. **Lecturer** : One each of French, Archaeological Chemist, Experimental Psychology, Statistics, Physical Chemistry (Temp.), Geography, Philosophy, Philosophy-Nyaya Pandit (Temp.) and three in Physics (Two posts are Temp.)

The details of qualifications, pay etc. and prescribed application form can be obtained by sending a Postal Order of Rs. 10/- drawn in the name of the Registrar with a self-addressed envelope (23 cm X 10 cm.) bearing postal stamps of Re. 1/- to the Registrar, University of Poona, Ganeshkhind, Pune-411007 or by paying the cash in the University office.

Ref. No. Admn/3181.
Date: 18th March, 1980

S.P. Bhosale
REGISTRAR

ANDHRA PRADESH AGRICULTURAL UNIVERSITY

ADMINISTRATIVE OFFICE
RAJENDRA NAGAR
HYDERABAD-500030.

Advertisement No. 2/80 Dt. 13-3-1980

Applications are invited in the prescribed form along with registration fee of Rs. 5/- for the posts of Artist-cum-Photographers in Andhra Pradesh Agricultural University, so as to reach the Registrar on or before **30-4-1980**.

Total Number of vacancies:
(Two posts are reserved for candidates belonging to Scheduled Castes and one post is reserved for Backward Class 'A' group.)

Scale of Pay:
Rs. 550-20-850-25-900.

Qualifications prescribed :
(i) Pass in S.S.L.C. or H.Sc. or an equivalent examination.
(ii) Diploma in Commercial Art of any recognised Institute or any equivalent qualification.
(iii) A Certificate of Photography from a recognised Institute.

Note: The basic pay at a suitable

stage within the approved pay scale will be allowed in deserving cases.

Application forms can be had from the Registrar, Andhra Pradesh Agricultural University, Rajendranagar, Hyderabad-30 on payment of Rs. 2/- in person or through postal order uncrossed.

T. Narayan Reddy
REGISTRAR

CENTRE OF ADVANCED STUDY IN PSYCHOLOGY
UTKAL UNIVERSITY
VANI VIHAR,
BHUBANESWAR-751004

Applications are invited for the under mentioned vacancies: Advanced teaching and research is undertaken in the following four areas :

(a) Social, (b) Comparative & Physiological, (c) Educational, and (d) Developmental Psychology.

(a) **RESEARCH ASSOCIATES** (About three) Rs. 1000/- or Rs. 1,200/- or Rs. 1,400/- P.M.; Requirement—Ph.D. in Psychology, or Education with specialisation Ed. Psy.

(b) **SENIOR RESEARCH FELLOW:** (About two)—Rs. 600/- p.m.; Requirement—Ph.D. in Psychology or Education with specialisation in Ed. Psy., or equivalent publications.

(c) **JUNIOR RESEARCH FELLOW:** (About two)—Rs. 400/- p.m.; Requirement—Atleast B+ in M.A. in Psychology.

(d) **TEACHER FELLOW** (Eleven)—Living allowance of Rs. 250/- p.m. in addition to salary from the employer; Requirement—University and college teachers securing atleast 50% in M.A. in Psychology.

(e) **NATIONAL SCHOLARSHIP:** (Eight)—Rs. 250/- p.m.; Requirement—Outstanding psychology honours graduates desiring to continue M.A. in psychology in the department from July, 1980.

Forms will be supplied on receipt of Rs. 3.21 by crossed Indian Postal order, payable to **Head, Department of Pshychology, Utkal University, Bhubaneswar-751004**, and a self addressed Registered envelope. Forms are available free for National Scholarship only.

Last: date of submission of completed application forms for all categories except (e) is **20-4-1980**. Last date for category (e) is **30-6-1980** or within two weeks of publication of B.A. Examination results, 1980 of Utkal University.

Note —Those applying for Teacher Fellowships have to apply for admission to the M Phil. course in psychology. Forms will be available from the Administrative Officer, P.G. Central Office, Utkal University, Bhubaneswar-751004, on written request and on payment of crossed Indian Postal Order for Rs. 3.14, by **31-5-1980**.

R. Rath
HEAD

Indian school of Mines

DHANBAD-826004.

Advertisement No. 420003/80 **Dated March 10, 1980**

The Indian School of Mines (deemed to be a University under the UGC Act) invites applications for the following permanent posts, unless otherwise stated.

8. ***One Senior Tech. Assistant for the Deptt. of mining Engineering.***

QUALIFICATION AND EXPERIENCE:

Essential: (1) Diploma in Instrumentation Technology or in Mechanical/Electrical Engineering/Electronics from a recognised polytechnic (or equivalent approved qualification) **OR** Certificate in Instrument repair and maintenance from an ITI (or equivalent approved qualification).
(2) Experience in repair, maintenance and fabrication of instruments in any industrial/research/testing laboratory for a period of about five years for candidates holding a diploma and 10 years for those holding a certificate.

Desirable: (3) Experience of handling electronic instruments and/or ability to develop instruments/equipment.

1(a) **One Senior Technical Assistant for the Department of Chemistry Fuel and Mineral Engineering.**

QUALIFICATION AND EXPERIENCE:

Essential: (1) Diploma in Instrument Technology (or equivalent).
(2) Experience in working in a Mineral Engineering Laboratory will be preferred.

2.2 **Two Scientific Assistant/Professional Assistant for Library.**

QUALIFICATIONS AND EXPERIENCE:
(1) A good Bachelors' Degree (Essential).
(2) A Degree or Diploma in Lib. Science (of one year's duration after graduation) with at least 60% marks (Essential but relaxable in case of candidate otherwise well qualified).
(3) Experience of at least two years in a technical or scientific library of standing (Essential).
(4) Good knowledge of technical processing work of documents (familiarity with UDC/AACR) (Essential). For one post familiarity and experience in Reprography work.
(5) Good handwriting and knowledge of typing.

PAY SCALES: Rs. 550-900/- for STA/SSA, Rs. 425-700/- for SA/PA, in addition, allowances admissible as per Govt. of India Rules Sanctioned from time to time. Total emoluments currently amount to Rs. 826.80 at the Rs. 550/- stage, Rs. 647.70 at the Rs. 425/- stage.

Age Limit: Not more than 30 years for STA/SSA and 25 years for PA/SA. Upper age limit relaxable by five years for SC/ST candidates. Age limit also relaxable in case of persons otherwise considered especially suitable.

General: Other things being equal, preference will be given to SC/ST candidates.

Further details and prescribed application forms are obtainable from Registrar, Indian School of Mines, Dhanbad-826004 on sending a self-addressed envelope of size 30 cm x 12 cm affixed with postage stamps of the value of Rs. 3.45 only. Completed application forms should reach the Registrar on or before 15th April 1980.

CANVASSING IN ANY FORM WILL BE TREATED A DISQUALIFICATION

S.P. Varma
REGISTRAR

—O/ISM/80—

INDIAN INSTITUTE OF TECHNOLOGY

KHARAGPUR

Advertisement No. R/1/Scheme/ Centre/80

Applications are invited for the undermentioned posts in the different Centres/Sponsored Research Schemes at the Indian Institute of Technology, Kharagpur, West Bengal. All posts are on contract basis for the periods specified or for the duration of the Schemes, whichever is less. The contracts are renewable if the Schemes are continued.

I. AERONAUTICAL ENGINEERING DEPARTMENT

Scheme : "Studies on Remotely Controlled Flight Vehicles" (A.R.D.B. Scheme).
Post : JUNIOR SCIENTIFIC OFFICER—2 posts
Scale of Pay :
Rs. 700 - 40 - 900- EB- 40-1100- 50-1300/-plus D.A. as admissible.
Age : Betwcen 25 and 38 years.
Duration : 2 years.
Qualifications :
A good academic record with a Bachelor's degree in Aeronautical Engineering.

II. AGRICULTURAL ENGINEERING DEPARTMENT

(i) **Scheme** : "Model Agronomic Experiments Scheme" (ICAR Scheme)
Post : ASSISTANT AGRONOMIST 1 post
Scale of Pay :
Rs 700-40-900-EB-40-1100-50-1300/-plus D.A. as admissible.
Age : Between 25 and 38 years.
Duration : 2 years.
Qualifications :
Essential : First Class M.Sc. AGE (Agronomy) and Ph.D. in Agronomy or Crop Production.
Desirable :
Knowledge of (1) Agricultural Statistics and Field experimentation, (2) Preparation of research reports.
(ii) **Scheme**: "Energy Requirement for Agriculture Production" (ICAR Scheme)
Post : SENIOR RESEARCH OFFICER—1 post
Scale of Pay :
Rs. 1100-50-1600/- plus D.A. as admissible.
Age : Preferably between 30 and 40 years.
Duration : 5 years.
Qualifications :
Essential : (i) First Class Master's degree in Agri. Engg. (ii) 5 years' experience in Farm Machinery both in teaching and research.
Desirable :
(i) Doctorate in Agricultural Engg. (ii) Knowledge in modern methods of investigations.

III. ELECTRONICS & ELECTRICAL COMMUNICATION ENGINEERING DEPARTMENT

Scheme : "Development of Low Loss Ferrimagnetic Inks etc." (D.S.T. Scheme)
Post : PROJECT OFFICER—1 post
Pay : Rs. 1000/- p.m. (consolidated)
Age : Below 30 years.
Duration : 3 years.
Qualifications :
Essential: M.E./M.Tech. in Solid State Devices/Micro-electronics or M.Sc. with Electronics special with two years' experience.
Desirable :
Experience in fabrication of semiconductor devices and hybrid thick film circuits.

IV. JERSEY BULL MOTHER FARM

Scheme : Sponsored by I.D.C.
Duration : 3 years.
(a) **Post**: SENIOR PROJECT MANAGER—1 post
Scale of Pay :
Rs. 1100-50-1600/- plus D.A. as admissible
Age: Not less than 35 years.
Qualifications :
Essential : (i) Good degree in veterinary science from a recognised University, (ii) Postgraduate degree in Veterinary Science/Animal Husbandry/ Dairy Management or allied subjects, (iii) Practical experience in the Management of a Cattle Breeding Farm, preferably exotic stock, (iv) He should have experience of not less than 10 years of which about 5 years on a farm of exotic breeds.
Desirable :
(i) Experience of using frozen semen (ii) Experience of producing fodder.
Job description:
Selected candidates will be responsible for the efficient management of the farm of pure bread exotic stock, supervision and planning of farming operations, coordination with other technical officers in the implementation of field A.H. Programme and general administration.
(b) **Post**: JUNIOR PROJECT MANAGER (VETERINARY)—1 post
Scale of Pay:
Rs. 700-40-900-EB-40-1100-50-1300/-plus D.A. as admissible.
Age : Not less than 35 years.
Qualifications :
Essential: (i) Good degree in Veterinary Science from a recognised University, (ii) Experience of about 10 years of which about 5 years should be in a cattle breeding farm of exotic stock, (iii) Experience in control of diseases including infectious and non-infectious.
Desirable:
(i) Advanced higher training in Veterinary Science, (ii) Experience of organising Veterinary dispensary.
Job description:
Selected candidate will be responsible for health and hygiene of farm animal, including vaccination schedule.

V. MATERIAL SCIENCE CENTRE

Scheme: "Development of Alkaline Durable Glass Fibres for reinforcement with cement"—(D.S.T. Scheme)
Post : RESEARCH ENGINEER—1 post
Pay : Rs. 1300/- pm. (consolidated)
Duration : 3 years.
Qualifications:
Essential: A good Bachelor's degree in Mechanical / Metallurgical / Civil/ Ceramics Engineering with adequate research/industrial experience,
OR
a Ph.D. in Physics/ Chemistry with adequate experience in glass fibre drawing/composite materials.
Desirable :
Experience in the field of Ceramic Fibre Composites.

VI. POST HARVEST TECHNOLOGY CENTRE

(i) **Scheme**: "Design, Development & Evaluation of Farm Level and Commercial Grain Driers and Drying System" (ICAR Scheme)
Post: JUNIOR RESEARCH ENGINEER—1 post
Scale of Pay:
Rs. 700-40-900-EB-40-1100-50-1300/-plus D.A. as admissible.
Age: Not exceeding 35 years.
Duration: 2 years.
Qualifications:
Essential: Bachelor's degree in Agricultural Engineering with two years' experience in Crop Processing or M.Tech. in Crop Processing.
Desirable:
Research or teaching experience in Crop Processing.
(ii) **Scheme**: "Development and Testing of Farm Level and Solar-cum-Husk Fired Grain Dryers and Drying System"—(D.S.T. Scheme)
Post: JUNIOR RESEARCH ENGINEER—1 post
Pay: Rs. 1200/- p.m. (consolidated)
Age: Preferably between 25 and 38 years.
Duration: 2 years.
Qualifications:
Bachelor's degree in Mechanical/ Agricultural/Chemical Engineering with two years' experience in Crop Processing or M.Tech. in Crop Process Engineering or equivalent.
Desirable:
Research or teaching experience in Crop Processing.
(iii) **Scheme**: "Harvest and Post Harvest Technology"—(ICAR Scheme)
Post: JUNIOR RESEARCH OFFICER—2 posts (Entomology/Biochemistry)
Scale of Pay:
Rs. 700-40-1100-50-1600/-plus D.A. as admissible.
Age: Not exceeding 35 years.
Duration: 5 years.
Qualifications:
Essential: (i) First class Master's degree in Agriculture or Zoology with specialization in Agr. Entomology/ First Class Master's degree in Bio-Chemistry or Chemistry with specialization in Bio-Chemistry or Food Technology. (ii) Three years experience in Research in appropriate field. (iii) Ph.D. in appropriate branch.
Desirable:
Knowledge of statistics and field experimentation, preparation of research reports etc.
(iv) **Scheme**: "Regional Extension Service"—(Deptt. of Food, Govt. of India Scheme).
Duration: 5 years.
(a) **Post**: DEPUTY DIRECTOR (EXTENSION)—1 post

Scale of Pay:
Rs. 1200-50-1600-60-1900/- plus D.A. as admissible.
Age: Preferably between 30 and 40 years.
Qualifications
Essential: (i) First Class Master's Degree in Agricultural Engineering. (ii) 5 years' experience in Crop Process Engg. both in teaching and research.
Desirable:
(i) Doctorate in Agricultural Engg. (ii) Knowledge in modern methods of transfer of technology.
(b) **Post:** EXTENSION OFFICER—1 *post*
Scale of Pay
Rs. 700-40-1100-50-1600/- plus D.A. as admissible.
Age: Preferably below 30 years.
Qualifications:
Essential: (i) First Class Master's degree in Agri. Engg. (ii) 2 years experience in Crop Process Engg. both in teaching and research.
Desirable:
Knowledge in modern methods of investigation and extension.

VII. RADAR AND COMMUNICATION CENTRE

(i) **Scheme:** "Microwave Antennas including Phased Arrays"
Duration: 2 years.
(a) **Post:** PRINCIPAL SCIENTIFIC OFFICER—2 posts
Scale of Pay:
Rs. 1500- 60- 1800- 100- 2000 /- plus D.A. as admissible.
Age: Preferably below 50 years.
Qualifications:
Essential: (i) A good academic record with a Master's degree in Electronics and Communication Engineering or its equivalent; (ii) 10 years' experience in the field of Antennas, Phased Arrays, Electromagnetics, of which at least 5 years in the research and development work; and (iii) Published research work of good quality in journals of repute.
Desirable:
(i) Doctorate degree (ii) Good design and/or industrial experience.
(b) **Post:** SENIOR SCIENTIFIC OFFICER—2 posts
Scale of Pay:
Rs. 1100-50-1600/- plus D.A. as admissible.
Age: Preferably between 30 and 45 years.
Qualifications:
Essential: M. Tech. degree with first class at the Bachelor's degree level in Electronics and Communication Engineering or equivalent with 5 years' experience in research and development work.
Desirable:
Experience in carrying out research, corporate membership of a recognised Institution. Specialisation in any one of the following :—
(1) Microwave Antennas,
(2) Phased Array Antennas,
(3) Electromagnetics.
(c) **Post:** JUNIOR SCIENTIFIC OFFICER—1 post
Scale of Pay:
Rs. 700-40-900-EB-40-1100-50-1300/- plus D.A. as admissible.
Age: Not exceeding 35 years.
Qualifications:
Essential: (i) First class Bachelor's degree in Electronics and Communication Engineering or equivalent. (ii) At least two years' experience in research/development work.
Desirable:
M. Tech. degree in Electronics and Communication Engineering.
Specialisation:
Knowledge in any one of the following :—
(1) Microwave Antennas,
(2) Phased Arrays,
(3) *Electromagnetics.*
(ii) **Scheme:** "Studies on Electromagnetic Scattering and Target Identification."
Post: SENIOR SCIENTIFIC OFFICER—2 posts
Scale of Pay:
Rs. 1100-50-1600/- plus D.A. as admissible.
Age: Preferably between 30 and 45 years.
Duration: 2 years.
Qualifications and Specialization:
Essential: M. Tech. degree with first class at the Bachelor's degree level in Electronics and Communication Engineering or equivalent with 5 years' experience in research and development work.

Desirable
Experience in carrying out research, corporate membership of a recognised Institution. Specialisation in any one of the following—
(1) Microwave Antennas.
(2) Phased Array Antennas.
(3) Electromagnetics.
(ii) **Scheme** "Feasibility Study of Phased Array Radar Systems including applications for Missile Tracking and Precision Approach Radar."
Post: JUNIOR SCIENTIFIC OFFICER—2 posts
Scale of Pay
Rs. 700-40-900-EB-40-1100-50-1300/- plus D.A. as admissible.
Age: Not exceeding 35 years.
Duration: 2 years.
Qualifications:
Essential: (i) First Class Bachelor's degree in Electronics and Communication Engineering or equivalent. (ii) At least two years' experience in research/development work.
Desirable:
M. Tech. degree in Electronics and Communication Engineering.
Specialisation:
Knowledge in any one of the following:—
(1) Microwave Antennas,
(2) Phased Arrays,
(3) Electromagnetics.
(iv) **Scheme:** "Detection of Geological Discontinuities and Weak Zone in Coal Mines using Radar Techniques"
Duration: 2 years.
(a) **Post:** SENIOR SCIENTIFIC OFFICER—1 post
Scale of Pay:
Rs. 1100-50-1600/- plus D.A. as admissible.
Age: Preferably between 30 and 45 years.
Qualifications:
Essential: M. Tech. degree with first class at the Bachelor's degree level in Electronics and Communication Engineering or equivalent with 5 years' experience in research and development work.
Desirable:
Experience in carrying out research, corporate membership of a recognised institution.
Specialisation in any one of the following:—
(1) Microwave Antennas.
(2) Phased Array Antennas.
(3) Electromagnetics.
(b) **Post:** SCIENTIFIC OFFICER—1 post
Scale of Pay:
Rs. 700-40-900-EB-40-1100-50-1300/- plus D.A. as admissible.
Age: Not exceeding 35 years.
Qualifications:
Essential: (i) First Class Bachelor's degree in Electronics and Communication Engineering or equivalent. (ii) At least two years' experience in research/development work.
Desirable:
M. Tech. degree in Electronics and Communication Engineering.
Specialisation:
Knowledge in any one of the following:—
(1) Microwave Antennas.
(2) Phased Arrays.
(3) Electromagnetics.

Application forms may be had from the Registrar on request along with an unstamped self-addressed envelope of size 23 cm x 10 cm. Applications accompanied with an application fee (non-refundable) of Rs. 7.50 (Re. 1.87 for SC/ST candidates) payable by means of crossed Indian Postal Order to the Indian Institute of Technology, Kharagpur, at Kharagpur-2 Post Office should reach the Registrar, IIT, Kharagpur by the **30th April, 1980.**

Applicants who are in the employment of Government / Semi-Government organisations or any Government undertaking must send their applications through proper channel.

A.K. Sur
REGISTRAR

PUNJABI UNIVERSITY

PATIALA

Notice

Reference our advertisement No. 9/Est/EPS/PRG/80 Published in March 15, 1980 issue, the last date for the receipt of applications both for advance and through proper channel for the post of Professor of Economics has been extended upto April 15, 1980.
No.12/Est/SPS/PRO/80.

REGISTRAR

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